Ancient Pakistan - An Archaeological History

Volume IV: Harappan Civilization - Theoretical and the Abstract

Mukhtar Ahmed

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Harappan Civilization - Theoretical and the Abstract

Foursome Group
Ancient Pakistan - An Archaeological History

Volume I: The Stone Age
Volume II: A Prelude to Civilization
Volume III: Harappan Civilization - The Material Culture Volume IV: Harappan Civilization - Theoretical and the Abstract Volume V: The End of the Harappan Civilization, and the Aftermath

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Harappan Civilization - Theoretical and the Abstract

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Foreword to *Ancient Pakistan – An Archaeological History*



Politically, Pakistan is a new state. Historically, however, its outlines can be traced back to at least 50,000 years. Pakistan is an Islamic state but culturally it is byproduct of a multitude of historical processes, of which Islam is only the most recent

component. These historical processes were primarily the result of geographical and geological features of the land, which have shaped not only her history but prehistory as well. Through these processes, this piece of land, irrespective of its names and political configurations at differing times, emerged as a distinct cultural entity at a very early stage and, as such, it deserves a historical treatment separate from India and separate from Central Asia. This book, spread over five volumes, is a partial answer to this need.

In undertaking this work, I have been all too aware that ultimately this exercise bore upon the existence of Pakistan from the very early times as a unique geographical and cultural reality, of which the Indus Civilization was only one of the several manifestations that are known to the general public. This reality, long ignored, is indeed a cornerstone of the present work. As the reader proceeds with the narration, he or she realizes that age by age, period by period, region by region, cultural traits are born, grow, and change as they interweave with other traits and form institutions, social behavior, cultural values, and technological bases that together make up the prehistory of Pakistan. In this process, the reader also realizes that this history is quite different from that we come across in the east of the Indus Valley or to the north and the west of the Hindu Kush Mountains.

Pakistan has been an area of intensive archaeological research for over a century. In recent times the pace of this research has increased manifold, and despite some major unknown areas, we have reached a stage of knowledge where it is possible to offer a connected account of the prehistory of this land primarily, if not exclusively, on the basis of archaeology. The present work aims to do that. It is, however, much more than a compendium of archaeological data of ancient time, bringing out, as it does, the flow of Pakistan's grass-root archaeological history in all its continuities and diversities.

It is an attempt to sum up the heritage of the remote past of this vast and in so many ways a unique region to which we owe our present e'lan in South Asia. It has twofold ambition, to embrace the

remote past of the Greater Indus Region, now called Pakistan, in its entirety and to sum up all that we know about that past at the present time. It adopts an intellectual approach that is more interpretative than descriptive, placed in a universal frame of reference. Pakistan's history and prehistory has been traditionally told in context with "India" or the Indian subcontinent, often termed as South Asia; this book parts company with its predecessors on several essential points. In the first place, it deliberately confines itself to shedding light on only one geographic area of South Asia rather than attempting to search for some kind of elusive unity in clearly diverse region. Secondly, it concentrates on the history of cultural development rather than on events.

Beginning with the first stone tools in Pothwar in the north of Punjab, the book traces the archaeological history of this land and examines the multiple strands of cultural development that weave the prehistory of this country all the way to its early historic foundations. Among other things, it discusses the basic significance of the prehistoric studies of the Greater Indus Valley, the variegated pattern of the beginning of human existence in Pothwar through the course of the Ice Age; the beginning of agriculture and village life in Baluchistan and western Sind; the evolution of a prehistoric high culture that came to be known as the Indus or Harappan Civilization; the examination of the possible causes of the decay and demise of the Indus way of life and its transformation into a culture which, for lack of any other suitable name, we must refer to as the Vedic transformation. This material has been arranged as follows:

Volume I: *The Stone Age:* This volume deals with the question of the early hominins that populated this land in the remotest past, the stone tool technologies and their transformation with time, and the direction that these traditions were setting for the coming agricultural revolution. Chronological;lie, this volume covers the time period from *ca.* 2 million BC to *ca.* 10,000 BC.

Volume II: *A Prelude to Civilization:* This volume essentially covers the beginning of agriculture and animal domestication in Pakistan, development of farming villages, and the evolution of the Early Indus cultures throughout the Greater Indus Valley, along with the concomitant changes in artifactual technology, the pottery, the art, and the subsistence practices. It leaves the Indus man at the doorsteps of an urban society, namely, the Indus or the Harappan Civilization. This volume covers a time period between ca. 10,000 BC to 2,500 BC.

Volume III: *Harappan Civilization - The Material Culture.* As the title implies, it covers the rise and fall of the material culture of the Harappan Civilization. This volume covers the time period between *ca.* 2,500 BC to 1,800 BC.

Volume IV: *Harappan Civilization - Theoretical and the Abstract*. This volume deals with a few theoretical and abstract issues, such as the language and the script, the religion, the social organization, and the nature of the Harappan state, etc, which could not be dealt in other volumes. Like Volume III, this volume also deals with the time period between ca. 2500 BC and 1800 BC.

Volume V: *The End of the Harappan Civilization, and the Aftermath*. This volume deals with the decay and demise of the Indus Age, the examination of of the various degenerated local cultures that replaced the Harappan Civilization, causes and enabling factors assigned to this decay, and the problem of the advent of the IndoAryans in the greater Indus Valley. This material is connected with the time period between *ca.* 2000 BC and the middle of the first millennium BC.

These five volumes cover an immensely long period of time and encompass a large set of

archaeological data. A certain level of previous knowledge about the subject is needed to fully comprehend the material evidence and appreciate the bases of interpretations.This background knowledge is briefly covered in the respective volumes to render them independent readings. For those who would rather start with firmer footings or for those who would like to explore the relevant topic somewhat further, an extensive Bibliography has been attached to each volume.

Given the extraordinary discoveries of human fossils in Africa, the fascinating finds of cave art in Central India, superb specimens of stone tools in Western Europe, and the antiquity of agriculture in the Fertile Crescent, one may wonder, why study the Stone Age record of Pakistan at all? The simple answer is that Pakistan has its own remarkable finds, and it has an archaeological record that rivals in richness those in better known regions of the world. The more complicated and important reply, however, is that Pakistan has a distinctive early archaeological record that challenges many of the models and theoretical frameworks that have emerged on the basis of findings made in other regions. It provides the opportunity to reevaluate, refine and in some cases revise a number of major conclusions concerning our evolutionary history, including the evolution of man; the emergence of modern human behavior; the beginning of sedentism and agriculture; the emergence of social complexity and urbanization; and constantly confronting the problem of incursions by barbarian argo-pastoral intrusions, which kept this land politically out of balance throughout its history but at the same time benefited it with new blood, new ideas, new socio-economic systems, new religious thoughts, and much more.

Pakistan is of course not just of interest to archaeologists. It is a land of incredible cultural, linguistic, ethnic, and genetic diversity, and its contemporary populations have constituted the focus of a wide range of disciplines, including anthropology, linguistics, history, and population genetics. In these disciplines too, Pakistan has much to offer in terms of general theoretical models and frameworks. Indeed a number of noteworthy studies in the ancient past of Pakistan has been undertaken in the past fifty years or so, taking advantage of the progress made in the disciplines of geology, archaeology, anthropology, linguistics, population genetics, ethnography, biological sciences, sociology, and the like. All of these research areas, however, suffer from two key problems. One is their isolation and lack of engagement with other disciplines investigating this geographical area. The other is the almost universal convention of studying Pakistan as a part of “India”.

This volume constitutes a bold attempt to bring together a variety of these disciplines in the study of Pakistan’s ancient past and to study this region in its own right, not as a part of some hypothetical “India”, nor a part of some nebulous “Central Asia”. This is, of course, a huge undertaking and no one person, no matter how great his or her capabilities, can be expected to do it a justice. Thus, *Ancient Pakistan* can only be viewed as the beginnings of what is hoped will be followed by other more scholarly treatment of the subject.

The term ‘Pakistan’ is a political designation, meant to describe an area containing the modern nationalities of Punjabis, Sindhis, Baluchis, Pashtuns, Kashmiries, Makranis, Muhajirs, Hazaras, and a whole number more. Pakistan is a large landmass, measuring almost a million square kilometers in extent and is the second largest of the seven countries that make up the South Asian region, India being the largest. It is the sixth most populous country in the world. The size of the landmass in itself suggests that there is much to be gained from examining the history of human geography, including population dispersals, cultural interactions of various ages, and deciphering the overall trajectory of human evolution in this unique region.

Pakistan presently contains nearly 180 million inhabitants. The people in this landmass speak at least 25 different languages although almost all of them belong to one single family of languages, the Indo-Iranian. The linguistic diversity of Pakistan is matched by a wide and impressive cultural, tribal, and genetic diversity. For example, here one encounters “African-looking” people (the Makranis) on one hand and distinctly “Mongol-type” population (the Hazaras) on the other. In recent years, geneticists have been particularly enthusiastic about tracing the history of various Pakistani populations, linguistic groups, cultural and regional ‘nationalities’, and anatomically distinguishable endogamous groups, through mapping their genes and making connections with other world populations. These methodologies and results have been published in journals of diverse disciplines and their tempo seems to be increasing in recent years. The reader will find references to these research works as we proceed with our account in respective volumes.

The *Ancient Pakistan* has been written on historical principles, beginning with the discovery of stone tools of the early hominids in the Pothwar Plateau two million years ago and culminating at the end of the Harappan Civilization some 1500 BC. It is not a linear story but efforts have been made to make it as streamlined as possible. The principal topics in all volumes are mainly dealt with from the perspective of archaeology, aided by anthropology, along with a sprinkling of geology and population genetics. There are several reasons for approaching the ancient history of Pakistan in this way, the most important of which is that there is a dire need for such a narration and no major exposition of this nature so far exists. Secondly, this kind of narrative allows one to present and discuss a range of opinions on the various subjects that are pertinent to the study of ancient lands.

The approach taken here is also a geographical one. This is something that plays an essential part in understanding the regional character of Pakistan’s cultures throughout the changing times of the past and its fundamental quality of diversity. The character of Pakistan’s changing cultures is as distinct as that of Europe, for example. Like Europe, it comprises a number of cultural and linguistic entities, the composition of which has changed continuously through its long history. One of the distinctive features of Pakistan’s cultural history is the way in which it has encapsulated human communities of diverse nature at many different cultural and technological levels, allowing them, to a large extent, to retain their identity but still making it possible to establish inter-community relationships.

These characteristics have given the peoples of Pakistan in prehistory a peculiar flexibility and adaptability of their own. It is evident from a variety of prehistoric data that in changing circumstances the people had within themselves the means, and the intellectual reserves, to deal with the often catastrophic problems that arose in the unpredictable environment of the region. The history has shown that when one means of survival became impossible there was always another.

The basic premises of this work are three. First, it is a fallacy to portray the Indian subcontinent of antiquity as a single geographical and cultural unit of which ancient Pakistan is supposed to have been a part. Archaeological evidence is overwhelmingly against such a proposition. Even a cursory look at the archaeological data would

In fact, the world known to the inhabitants of ancient Pakistan was the world more to its west than to its east.

show that the region that is now known as Pakistan always remained shy of India, namely the area that lies beyond the Great Indian Desert, but has had considerable affinity, both cultural and genetic, with Central Asia. Second, ancient Pakistan, consisting essentially of the Indus plains and the surrounding

hills and plateaus, started to develop as a culturally interrelated region right from the Stone Age. The large bank of stone artifacts, the nature of lithic technologies, and the newly accumulating genetic data, stand witness to this proposition. This was, of course, the result of its peculiar geography, which provided it with a wall of mountains to its west to separate it from Central Asia, and a formidable desert, the Thar, to its east to separate it from the rest of the Indian subcontinent. Third, ancient Pakistan did not exist in isolation; from the very beginning, it was either a part of the known world or its past can be better understood in context with the prehistory of the known world. This world is by no means confined to “India” or the Indian subcontinent in general but extends long distances to the West. In fact, the world known to the inhabitants of ancient Pakistan was the world more to its west than to its East.

Starting from these working hypotheses, I have attempted to indicate the nature and succession of various cultures, which determined the early development pattern of this land. The evidence is generally archaeological in nature, but, as stated earlier, other disciplines, such as population genetics, linguistics, geology, anthropology, etc., also play their respective role. The geographic area discussed comprises the region within the approximate boundaries of the presentday Pakistan – from the Indo-Gangetic Divide to the Khyber Pass, from the foothills of the Himalayas to the coast of Makran, from the current IndoIranian borders to the Runn of Kutch, from the Gomal Pass to the dry bed of the Ghaggar-Hakra River at the edge of Cholistan, and from the rugged hills and valleys of Baluchistan to the vast desert of the Thar. The area between the Ravi and the Sutlej/Beas, although not within the current boundaries of Pakistan, is included as, geographically, it lies within the Valley of the Indus and has therefore been a part and parcel of the Indus cultures in the past. Similarly, a sliver of coastal land in Kutch, essentially the Indus delta, is also included although current political boundaries exclude it.

The superficial observer would sneer that India has had some episodes but no history, and ancient Pakistan and Central Asia had neither episodes nor history. This skepticism is used to justify lack of study and an absence of interest in the ancient past of Pakistan on the part of scholars. It is also used to justify the relegation of this land to a status of the Indian hinterland unless forced by overwhelming archaeological evidence to mention it separately as “northwestern India”. It is further used by the intelligentsia of Pakistan to justify the beginning of Pakistan’s history with the invasion of Muhammad Bin Qasim, or those of Ghouri, Ghaznavi, and the like at best and with the inception of the Muslim League at worst.

The considerations that follow will show that the absence of episodes does not necessarily negate the existence of history. Judged by the standard of time, this region was thickly populated from the very early times of human existence and these human beings have left a heavy trail of footprints on the sands of time. All we have to do is to reconstruct a history without episodes, which means that it cannot be the same type of history as we are generally familiar with through our school textbooks. The present series of books is a small step in that direction.

Essentially, this work is a narration of the story of the Indus man in his remote past, his struggle for survival, his ingenuity, his accomplishments, his failures, and his capacity to endure. At the end, it is an attempt to dislodge the student of history from the traditional timeline of Pakistan’s history and focus his or her attention on its very beginning. It is hoped that this effort will help the reader in thinking about Pakistan as a land of antiquity instead of looking at it only in terms of Muhammad Ali Jinnah, the Muslim League, the Partition of British India, or the playground of various military and

civil despots since then.

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At the end, it is hoped that this effort will help the reader in thinking about Pakistan as a land of antiquity instead of looking at it only in terms of Mohammad Ali Jinnah, the Muslim League, the Partition of British India, or the playground of various military and civil despots since then.

hensible story of Pakistan's ancient past could be told in context of Central Asia as well as that of the subcontinent. In doing so, if I have been able to wean the reader away from a purely Indocentric point of view of history and redirect his or her attention to the area of Baluchistan, Sind, Punjab, and the Pashtun country itself and do so with reference to Central Asia and Iran with which this land has had a long-standing historical and cultural relationship, I must consider this whole effort worthwhile.

This is, obviously, a radical change in perception and dissenting voices will definitely be heard. Since it is an unconventional approach and since this point of view is being advocated here

with some vigor and enthusiasm, it is inevitable that a great deal of technical detail had to be included. By the same token, if the reader detects a sort of missionary zeal in the book, it is inevitable, in fact necessary; it is the very *raison d'etre* of the present work.
One needs patience and a degree of perseverance for reading books on prehistory, archaeology, and anthropology (and now, on archeogenetics) in spite of the initial aura of romance associated with the subject. However, the reader who sticks to the task may find gratification and great satisfaction in sensing, as the author does, the heroic struggle of man to survive, his endless adaptation to the changing environment, and his compulsion or genius for material progress. The story of the early man who inhabited ancient Pakistan is particularly interesting; the presence of human ancestors in the northern Pakistan some two million years ago, their continued adaptation to the radically changing environment, their technological dexterity, as shown in the fashioning of their intricate stone tools, and their artistic abilities as are apparent from the exquisite paintings on pottery, is an intriguing story in itself.

The extraordinary contribution of the Indus people to the development of agriculture and animal husbandry in the foothills of Baluchistan has not yet been told fully but it has recently started to come to light, albeit grudgingly and albeit hesitantly. The remarkable acumen for city and town planning of the Harappans speaks volumes about their vibrant culture; their spirit of venture on the high seas still resonate in the word *Mallah* (the Sailor) which is evidently a derivative of the *Meluhha* by which the Mesopotamians knew the Indus people in the third millennium BC; their composition of religious hymns (the *RgVeda*) is undoubtedly the first; and their contribution to the development of Sanskrit and its vast literature is legendary. All this must make an interesting story.

The idea for undertaking this project principally stems from that towering archaeologist of India and Pakistan, Sir Mortimer Wheeler (*Five Thousand Years of Pakistan*, *Indus Civilization*, among others*)*. Additional inspiration comes from Aitzaz Ahsan's *The Indus Saga*, which in effect is a half-hearted appeal for looking at the history of Pakistan in its own right rather than as an appendix to the history of "India". The process of gathering together material, planning and writing this book imitate Yahya Amjad's book *Tareekh-ePakistan - Kadeem Daur.*

This book has not been written for fellow historians; its audience is the inquisitive student of history who is interested in looking into Pakistan's ancient past in some detail. The book is also intended for the general reader with an interest in the cultural history of Pakistan, and how it came to be as it did. It may also perhaps be useful to the student embarking on the study of South Asian archaeology or ancient history of this region. It is emphatically not a compilation or compendium of available information; nor does it claim to be comprehensive at the level of theory or ideas within the fields it touches. What I have tried to do is to tell as coherent a story as is possible at the present time, of the development of human life and culture within the region that lies between the Hindu Kush Mountains and the Thar desert, indicating the main trends, principal motivating factors and important turning-points, as we see them on the long road from the earliest toolmakers, over two million years ago, to Early Historic times in the early centuries B.C.

I am aware that what is known today about the remote past of this land is so tentative and fragmentary that it can be critiqued for not managing the subject in a way that comes to approaching completeness or definitiveness. This is, obviously not possible at this stage or anytime soon. Future research will definitely add more details to the subject and the interpretative approaches will surely keep on changing.

Finally, and most importantly, it must be stated and explicitly acknowledged that *Ancient Pakistan* is a synthesis of a large number of excellent writings by world-renowned archaeologists, prehistorians and scholars of related disciplines around the world. Since it is a synthesis, no originality is claimed. My job has been nothing more than putting in order the available information widely spread out in various books and monographs as well as original archaeological reports and research papers. Some of these writings have been extensively reproduced here without putting them in quotation marks, generally giving specific reference to their origins but sometimes, inadvertently, of course) without. However, most of these sources have been listed in the references at the end of each chapter or section. The same applies to various figures, photographs, drawings, and sketches. My gratitude to all these researchers and scholars is, of course, due and I am deeply indebted to all of these authors and publishers.

M.Ahmed

Preface



The material culture of the Harappan society has been extensively covered in the preceding volume (Volume III: *Harappan Civilization - The Material Culture*). There are, however, a few topics that are largely theoretical and they have been left unanswered.This volume is an attempt to fill this

gap. The issues at hand are numerous but we confine ourselves to only a few important ones.

There are five major areas that need consideration. The first is, of course, the social and political organization of the Harappan society. Was it a centrally organized state? Was it a commonwealth of city states? Was it a stateless society, bordering chiefdom of early agro-pastoralists model?, and above all: How did the individuals and their various groups interacted with each other? This is a complicated issue, to say the least, and a number of diverse opinions abound.

Although almost every major archaeologist, working in the greater Indus Valley, and every historian who had to do anything with the prehistory of 'India' had something to say on this subject and offered some comments on sociopolitical structure of the Harappan society but there has been no attempt to tackle this issue head on. S.C. Malik and Shereen Ratnagar seem to be the only exception. The major interest so far has been on the material culture of the civilization. Second reason is probably a lack of archaeological data from smaller sites, agricultural villages and pastoral camps. Over a thousand sites of the Harappan Civilization have been discovered so far, of which only half a dozen are cities and slightly more than a dozen can be identified as towns. Rest of the settlements fall in different categories like small or big villages, processing centers, ports, and temporary camps for exploitation of local natural resources.

A glance at the research strategy adopted by the Harappan archaeologists reveal that baring the site of Ganweriwala all the Harappan cities have been excavated on large scale, producing large quantity of data on various aspects like town planning, trade, and social, religious and sructure. This data has

enabled reconstruction of urban or city life of the Harappan people but it represents less than even 3% of the Harappan population. We have therefore, very little idea of the life in rural settlements, where more than 97% Harappans lived. Obviously "Small Harappan Site Archaeology" did not seem to be a priority of the Harappan archaeologists. This leads us to the question of the relationship between the villages and the cities or between the food producers and the non-producers. We also wonder how the society at large was structured and how did it sustained itself for more than 700 years. With the help of what is internally available in evidence and whatever we can learn from other contemporary civilizations, we try to tackle these issues as best as we can and the Section I is the result.

The second hot topic is the Harappan religion; it has been a topic of much interest from the day of the discovery of Mohenjo-daro and Harappa. There are some who looked for the roots of Hinduism in the religion of the Indus people; there are those who deny any such connection; and there are still others who define the Harappan religion in terms of hunter-gatherers' beliefs in animism, the world of spirits, and the diverse practices of shamanism. The subject is rife with attempts for showing an unbroken continuity in religious thought and practice from the Harappan Civilization to the present, thus defining the past through the present. Section II reviews these ideas in considerable details.

The most difficult aspects of prehistoric archaeological research and interpretation revolve around issues of language and script. Like religion, language is not passed on genetically but is a learned behavior that does not always correlate with genetic heritage. Furthermore, without the aid of written records, it is impossible to determine the language used by a prehistoric community. Although we have some short inscriptions from the Indus cities, the writing has not yet been deciphered and the language that the Harappan spoke remains still unknown. A large number of attempts for the decipherment of the Harappan inscriptions have been made and every now and then we hear about the success. It may be a scene of chasing the proverbial wild goose but it is an interesting history nonetheless.

The fact that the Harappans were a literate society was never in doubt. But, in recent years, probably as a result of repeated failures in its decipherment, have lead some scholars to pronounce the Harappan society not having script altogether, script in the sense of encoded speech. According to this hypothesis, the Harappan 'written' signs represent nonverbal form of communication, akin to the traffic signs on modern highways. They may, as well, be talismans, amulets, and magic signs, equivalent to the *Tweez,* the use of which is presently quite widespread all over the country. This is a very important theoretical development and the arguments given in its favor are of immense interest. In view of its importance and the far reaching consequences it represents, we have devoted two full chapters to the examination of this hypothesis.

Among other theoretical musing about the Harappan Civilization, is, of course, its "origins". In the beginning, the Harappan Civilization was considered an 'import' from western Iran and Mesopotamia and was in fact named an 'IndoSumerian" civilization. But it was soon realized that several indigenous factors were more important in its origin than those ostensibly coming from the West. The excavations carried out at Mehrgarh between 1974-1985 provided the earliest evidence for settled life in Pakistan, going back to the seventh millennium BC. It also provided solid evidence for the steady and gradual emergence of a number of regional cultures that flourished in Baluchistan, Sindh, and Punjab. It is now believed that the Harappan Civilization had its roots in these early cultures. In Section IV we review these developments and attempt to trace these roots.

Along with the ‘origin” comes the question of the ‘decline’ or ‘fall’ of the Harappan Civilization. The decline of the Harappan Civilization was as dramatic and enigmatic as was its emergence. A number of theories have been offered as the ‘cause’ or the ‘enabling factors’ for this decline and fall. We examine here some of these hypotheses. ‘Rise and Fall’ or the ‘Collapse’ of civilizations has always stirred the imagination of historians, and a large amount of literature on the rise and fall of the Roman Empire, accumulated over the past two centuries, is the evidence. But it is in recent times that this subject has started to be studied as a universal phenomenon. A healthy amount of literature, with accompanying theory, is coming in a steady stream. We review this literature in context with the Harappan Civilization.

A huge monkey ranch has lately been thrown into the scholarly discussion about the settlement pattern, the geography, and the historicity of the Harappan society by some Indian archaeologists of sort, the purpose of which is to appropriate the Indus Civilization to India (as opposed to Pakistan), expand its geographical expanse towards the east, dragging the center to the so-called Sarasvati region (along the Ghaggar River braids) and relegate the Indus region to a mere periphery. Even its good name, the Indus Civilization or the Harappan Civilization, is being changed to Sarasvati-Indus Civilization, better still, to the *Sarasvati Sindhu Sabhyata*.

The *RgVeda*, a collection of devotional hymns of bygone days, transmitted orally over a millennium, is being offered as a historic document and archaeological findings are being used to force-fit the RgVedic mythology, where archaeological interpretations must have ruled. This is an insidious attempt in modern myth-making. The onslaught on history is tremendous, a large part of this myth-making, presented as facts, has already penetrated into school and college textbooks in India and gradually creeping into the mainstream reconstruction of the Harappan society in other parts of the world. This myth-making must be resisted. Fortunately there are some respectable archaeologists and historians in India that are already speaking out against this overzealous ‘cultural nationalism’. We review these ideas and present some counterpoints.

Before we begin, it is useful to gain a general sense of the Harappan Civilization, indeed of the whole Indus Age, through a brief review of this important segment of Pakistan’ history. Only a general review is possible and that is attempted here in the Introduction. We have chosen only those topics that have some relevance to the theoretical discussions that follow.

M.Ahmed

Introduction



Around five thousand years ago, about 2600 BC to 1900 BC, a truly expansive civilization developed on the Indus River floodplains. A large number of settlements arose which were essentially urban in character, flanked by a still larger number of settlements

that were 'rural' in their economy. These settlements covered a remarkably large area - almost one million sq. kilometers of land according to some and a little over 500 sq. kilometers according to others, depending on how to count. This was not an isolated cultural event; the emergence of this civilization, commonly known as the Indus Civilization or the Harappan Civilization, is linked to the regional cultures that existed in the Greater Indus Valley prior to 2,600 BC. It declined during the early part of second millennium BC and was forgotten until its rediscovery in the 1920s by John Marshall and his colleagues. At its peak, this civilization may have had a population of well over five million.

As detailed in Volume III (*Harappan Civilization* - *The Material Culture*) of this series, there is a formidable record of archaeological work on the Indus Civilization. Basic surveys of the Indus Civilization are available in a number of sound sources; some of them are listed in the Bibliography at the end of this volume. The older books by Wheeler (1) and Piggott (2) are still useful sources on selected topics. A number of good bibliographies on the topic are also available. This wealth of data makes it impossible fully to review Pakistan's earliest cities, and perhaps its first state. Only a general review is possible and that is attempted in this chapter. We have chosen only those topics that have some relevance to the theoretical discussions that follow.

What is in the Name? This volume of *Ancient Pakistan* - *An Archaeological History* and the one that preceded it *(Harappan Civilization* - *The Material Culture)* deals with the Urban Phase of the Indus Civilization - generally known in archaeological circles as the *Greater Indus Culture Tradition*, beginning from *ca.* 7000 BC to *ca.* 1700 BC (3,11). Possehl prefers to call this the I*ndus Age* (6). The urban period is commonly called the Indus Valley Civilization or simply Indus or the Harappan Civilization. Some archaeologists and anthropologists would prefer to call it the *Mature Harappan*, to differentiate it from the Early Harappa, which preceded it and the LateHarappan, which followed it. The newest fashion, especially in India and among the expatriate Indian community in the US, is to rename it the *Indus-Sarasvati Civilization*. All these names mean the same entity, but carry different implications, some innocent, some heavily loaded with ideology and missionary zeal. Of course, each one of these terminologies have been provided with a convincing explanation as to why one should prefer to use some exotic and 'nationalistic' terms.

The name *Harappan Civilization* is selfevident. It is a common practice in archaeology to name a

particular culture or cultural phase after the first site where such a phase was first discovered. It is, thus, neutral in its connotation. The identification of the Harappan Civilization as the Indus Civilization or the Indus Valley Civilization stems from the fact that it centered in the Indus Valley. Playing on this theme, the cultures that gave birth to this civilization were called the Early Indus or Early Harappan, and those that emerged after the decline of the Mature Indus or Mature Harrappan was termed as Late Harappan or Late Indus. This nomenclature served its purpose by linking the urban civilization with its antecedent cultures but it also created much problems. For example, when we speak of the Harappan Civilization, what do we actually mean? Is not the Early Harappan and Late Harappan still Harappan? This ambiguity in terminology has been variously misused, especially by a whole crop of post-Independence Indian archaeologists and prehistorians who indiscriminately use the name Harappan for the Early Happan, Mature Harappan, and the Late Harappan sites, scoring a few points but confusing the data.

Some archaeologists advocate the designation of the Indus Civilization a ‘cultural complex’ rather than dividing it into three distinct phases and confining it within a prescribed geographical area. In their opinion, the entire *Indus Complex* shows a development of traditions which were either retained and modified, or abandoned because of their non-utility, and replaced by new ones. The trend of development of traditions is progressive or retrogressive depending upon the environmental context and this is apparent in the various levels or stages of development observed at the excavated sites. According to this point of view, these changes should be treated as parts of the entire cultural complex, and its stages of development should be treated as featured trends towards urbanization and its afterrmath. Viewed in this light, the various processes of evolution and devolution of the cultural complex can be constructed if the sites are not considered isolated, either locally or regionally.

Although these are high sounding ideas, it is not clear as to how does this facilitate our understanding of the nature or working of the Indus Civilization. Furthermore, by robbing off a civilization of its beginning or its end, how can we discuss its maturity, or even a discrete existence. We would, therefore, be content here with the simple model of the Early, Mature and Late Harappan phases, interconnected within the concept of the Indus Age or the Great Indus Tradition. This approach may have certain limitations but it has the advantage of being simple, easy to understand, and amenable to a theoretical grasp.

Some years ago Possehl developed another system of terminology to assist with the organization of archaeological record of the Indus Age (5). This involves the notion of a Pre-urban Phase, preceding the widely known Urban Harappan as exemplified at places like Mohenjodaro, Harappa, Chanhu-daro, and Kalibangan. The Urban Phase is then followed by a Posturban Phase, a term intended to rid the literature of the confusing, often misused notion of a "Late Harappan." This encompasses the period following the principal urban occupations at Harappa and the other Urban Phase sites. It should be emphasized that the Pre-urban, Urban, and Posturban Phases are not necessarily periods of the same duration throughout the entire Harappan region.

Some scholars in India have begun to use the term Saraswati-Indus or Sarasvati Civilization (7,8). The use of this name is based primarily on the misconception that a significant or even greater proportion of the ancient “Indus” sites were situated along the bed of the now dry Ghaggar-Hakra River braids, rechristianed as Sarasvati River. In fact, most sites along the dry river channel are relatively small and even the few large ones are not as large as the major cities on the Indus or its tributaries. The discovery of these sites is mainly due to the rapid abandonment of the region after the

river began drying up during the Late Harappan period. The lack of later occupation and the fact that no more silts were brought down with annual floodwaters has left these sites exposed and therefore easily identified by archaeologists. In contrast, the Indus settlements in other parts of the Punjab and Sindh have been buried by annual flood sediments or by later historical villages and cities.

It is unfortunate that a number of western writers, including a few notable archaeologists, have also started to use this name for fashion or collegial courtesy, if for nothing else. This trend is dangerous as there may not be a stop to this process. We should not be surprised if tomorrow someone would like to call the Harappan Civilization a Sindhu-Saraswati-Gujarati Civilization with a point to do so. To stop this unrestricted process and to avoid the confusion already created we need to go back to the well-accepted convention in archaeology, i.e. name the culture after the type-site where it is discovered or identified for the first time.

It is therefore suggested that we use the term "Harappan Civilization" instead of switching over from one term to another, which does no good but more harm to the subject. In this book we have followed this convention, as the title of this volume and the one preceding it (*Harappan Civilization - the Material Culture*) so clearly indicates. It should, however, be kept in mind that the term Harappan Civilization is synonymous with the Indus Civilization which has a much more wider currency in archaeological literature. The reader should, therefore, not be surprised if both terms are found to be in use here as alternatives. Scholars in Pakistan insist on exclusively using the term Indus Civilization and show a certain degree of distaste for the Harappan Civilization. This is besides the fact that the Indus Civilization is a general term which could mean different things to different people within the broader gambit of the Indus Age. The term Harappan Civilization, on the other hand, denotes a strictly defined cultural period in the Greater Indus Valley - an urban interlude between 2600 BC and 1900 BC.

The name Indus-Sarasvati Civilization is much more insidious. It first assumes that the river braids, which are known as Ghaggar in India and Hakra in Pakistan, were in fact the Sarasvati, a Vedic river of roaring proportions. It is then pointed out that a large number of “Harappan” sites were located around this river, thus making the whole civilization somehow Vedic.

What makes a site Harappan? A question naturally arises: what is indeed Harappan? Simply stated, the Harappan Civilization is the urban phase of a prolonged period of cultural development in the Indus Valley, routinely called the Indus Tradition. This is different from the Early Indus or the Early Harappan phase when the stirrings of urbanization were clearly visible in various Indus settlements but none of them could claim the status of a town or a city. This is also different from the Late-Harappan or post-Harappan when most of the vestiges of city life had already disappeared from the Indus settlements and these sites were nothing but a shadow of themselves. The Harappan Civilization, as distinct from the Early Harappan and the Late- or post-Harappan, represents the Mature Indus or Mature Harappan phase - the urban culture of the Indus Age in full bloom. All three phases - the Early, Mature, and the Late - are distinct in their material culture and early archaeologists have always kept this obvious distinction in mind when describing an Indus site. A better and cleaner periodization would be that proposed by Possehl, i.e. the pre-urban, urban, and post urban phases but their use is still not common and it has its problems.

In spite of the discovery of close to 500 Indus sites in Pakistan and more than that claimed in India, Harappa and Mohenjodaro produced the basic cultural markers by which other settlements

subsequently found could be identified as belonging to the Harappan or the 'Mature Harappan' civilization (or, the Urban phase of the Indus Age). These defining markers can be listed as follows: 1. Wheel-made pottery of a distinctive kind: baked to a red color, thick-walled, heavy, sometimes coated with red slip. Some pots were painted black, and there were certain popular motifs painted in black on the pottery, such as the pipal leaf, intersecting circles and the peacock.
2. The Indus script, especially appearing on

seals, with characters that show practically no regional variations and little change with time. 3. Baked bricks, as well as sun-dried mud-bricks

of standard size, with sides in the ratio of 1:2:4.

4. Standard weights, based apparently on a unit of 13.63 grams.
5. A tendency to layout straight roads (meeting others at approximately right angles) in urban and semi-urban settlements.
6. Considerable attention paid to the provision of water and drainage.
7. ‘Citadels’, or upper towns, built adjacent to, but separate from the main residential areas.
8. Burying the dead, laid supine, aligned northsouth, usually in out-of-town cemeteries.
9. Use of metals, especially copper, silver, and lead but no iron.
10.Use of seals and tablets, with short inscriptions.
Naturally, all these features are not to be expected at every settlement, especially those that were small or which have not seen any excavation. Pottery and bricks are perhaps the most easily noticeable markers. One important point has been mentioned very frequently in this connection: the lack of great changes in the life of the Indus cities, right from their birth up to their abandonment. The pottery, the tool types, and the seals remained the same. The writing also was static; this is in strong contrast to the region in the historical period, when the form of the letters varied so much from one century to the next that the script offers a fairly good method - sometimes the only known method - of dating manuscripts or inscriptions.
The urban period of the Indus Age, that is, the Harappan Civilization, generally falls between 2,600 BC and 1,900 BC, with some exceptions here and there. Before 2,600 we do not see a coherent urban culture anywhere although a few elements may be hazily visible at some selected sites in their fuzzy outlines. Similarly, a survey of the Harappan sites would reveal that most of the manifestations of urban life vanished from the Indus sites that survived a period of general abandonment *ca.* 1900 BC. Thus, chronology is another tool that provides us with some bearing on the stage of cultural development through which a given site must be passing through at the time and characterized as Harappan.

A stray Indus find does not make the site Harappan. These finds may indicate that the site had contacts with the Harappans but does not prove that it was an Harappan site itself.

Finally, and most importantly, the typology of artifacts found at any site is generally a good indication for its characterization. A stray Indus find does not make the site Harappan. These finds may indicate that the site had contacts with the Harappans but does not prove that it was an Harappan site itself. To make the site Harappan, one must connect several cultural dots and see if the general character of the site appears to be Harappan as a whole; is there sign of urban living? is there any inkling of writing? do we find there typical Harappan seals?, what is the materials of construction

used in the architecture? do we observe a slew of typical Indus artifacts or are we basing our analysis only on a stray find? etc.

Of course, almost all archaeologists subscribe to these above outlined criteria that define a Harappan site and separate it from the Early Harappan and the post-Harappan cultures. Not all, however, adhere to these criteria when it comes to describing their own finds. Naturally, this has created much confusion in reporting of archaeological data pertaining to the Harappan Civilization. Some Indian archaeologists are particularly prone to this practice, which is often deliberate. There are several sites in Gujarat, in fact scores of them, which have been described by the archaeologist like Rao, Joshi and Bisht as "Harappan" but which have in deed no relation to the Harappan Civilization, that is, the Mature Harappan Period. Most of them are LateHarappan or even post-Harappan. Similarly, hundreds of "Indus" sites have been located by other Indian archaeologists, such as B.B.Lal and his underlings, in the Ghaggar-Hakra basin as well as deep in the Indo-Gangetic Divide or even in western Uttar Pradesh in the East, the sole qualification of which to be "Indus" is the find of some stray Harappan artifacts at the site. Some of this sloppy treatment of archaeological data is deliberate for political and nationalistic reasons and some probably come from shear negligence or lazy thinking. A few American scholars are also guilty of this uncritical use of the terms but they could probably be excused as their primary description comes from the same archaeologists of sort who have created this confusion in the first place.

The publications sited for these 'discoveries' are spread over almost half a century, and definitions have changed during this time. Thus, what one excavator calls Harappan must not be what another excavator calls Harappan. Even the criteria for the Harappan sites agreed upon by the excavators have not been adhered to, notwithstanding the pious claims to the contrary. Bara sites have been included in Late-Harappan because of the available carbon dates. Sothi-Siswal sites have been included in the Early Harappan as well as Harappan sites. The post-Harappan sites of diverse cultures have been routinely listed under 'Harappan' sites. Thus, we have a reall mess at our hands.

The archaeological work undertaken in India could have shed useful light on the settlement pattern of the Indus Civilizationits eastward expansion, and its adaptation with changing environments, but a blatant disregard of the data, a severe lack of precision in reporting, an almost casual talk about the characterization of sites, and the absence of peer reviews or the field checks have rendered the whole work in Saurastra, Kutch, and the Divide almost worthless, even misleading. Such casual handling of a serious archaeological enquiry pertaining to a momentous time of human history in South Asia and putting the collected data in the service of 'nation building' or for 'claiming the past' has been a really low point in the indigenous scholarship, surpassed only by a plethora of recent writings on the 'Harappan Aryans", this time on textural grounds.

Most of this is the product of Hidutva zeal or a misplaced nationalistic emotionalism on the part of the archaeologists in question, openly encouraged by the bureaucracy, the academic establishment, and the press. The result is a lost opportunity to learn something tangible about the later manifestations of the Harappan Civilization in the Doab and Kutch. In view of this sad situation, the student of the Harappan Civilization must be cautious about the 'discovery' and description of any 'Harappan' or 'Indus' site made by these archaeologists of sort. We shall return to this sad situation in Section V.

Who Were the Harappans? This frequently asked question is certainly interesting although not

central to the understanding of the Harappan Civilization. The question is ireally ambiguous: Which aspect of “who-ness” is being addressed? Is it ethnicity, language affiliation, a contribution to a historical tradition, or the people who made some distinctive or identifiable body of material culture? In the absence of specificity, an answer to the question could reasonably be stated : ‘The folks who built the places now called Mohenjo-daro and Harappa or Ganweriwala, among others’. But, we know that the answer would satisfy no one.

The question probably implies a search for linguistic affiliation and origins, most likely a search for ethnic connection. It may even be true that the question has to do with a search for the area from which the Harappans might have migrated. Again, this is not an entirely unworthy problem; although most current thought on Harappan origins has concluded that a migration hypothesized for the genesis of the Harappan Civilization has little substance. Equally to the point is the fact that problems of this kind have proven impossible to solve given a purely archaeological context. Even with a substantial corpus of written historical material, this problem can pose serious difficulties. One could here refer to the Sumerian/Akkadian groups in ancient Mesopotamia and the immense difficulties scholars have had in dealing with that situation in all its complex reality in spite of the almost overwhelming corpus of texts. Thus, historical questions of this kind are best worked on within a theoretical context. There is simply an overwhelming mass of ethnographic and historical data which indicate that material culture does not correlate with ethnicity even though there are occasional instances where these paths do cross.

To begin with, we do not know what these people, who built such a vast cultural complex, were called. This is because of the failure to decipher the contemporary writings on the Indus seals. However, Mesopotamian context, direct or indirect, has produced some relevant evidence. The contemporary documents there speak of ships coming from Dilmun, Magan and Meluhha or Melukhkha; Sargon the Great boasts: “The ships from Meluhha. The ships from Magan. The ships from Dilmun. He made tie up alongside the quay of Agade.”

Dilmun or Tilmun, which is usually identified with the island of Bahrain, is supposed to be the clearing-house for goods bound for Sumer from the East. From Magan and Meluhha the ships brought copper ingots and implements - carnelian, ivory, shell, lapis lazuli, pearls, spices, etc. - materials specific to the Indus Civilization. On these grounds Magan and Meluhha have been taken to mean the 'Indus country'. Particularly Meluhha or Melukhkha, which suggestively resembles the much later Prakrit '*Milakkha*' or Sanskrit '*Mlechchha*’, - a name meaning 'a stranger of ill-pronounced speech', and applied to foreigners in Sanskrit literature - has the strongest possibility to be the oldest name of the Indus Valley. Magan could be a western coastal region of Pakistan, which still bears the name of Makran.

Efforts have been made to determine the ‘racial mix’ of these people through anatomical data obtained through the examination of skeletons found at several archaeological sites, more particularly at Harappa. Two conclusions can be drawn from these studies. First, the Harappan people fell into several ‘racial’ prototypes and these data tell us conclusively as to the manifest heterogeneity in the racial mix. Second, the average measurements of cranial length-breadth ratio of the Harappan skeletons are apoproximately the same as those of the present populations of Pakistan, thus indicating that the so-called ’racial mix’ of the Indus Valley has not changed much since then.

Studies of the ancient skeletal remains provides clues as to the genetic relationships between the

people of the Indus region and other areas of the ancient world (9) but these relationships are largely conjectural.The examination of the cranial measurements of the Harappan skeletons show three categories of inhabitants - Mediterranean type, Austroloid type, and Mongoloid type. This does not tell us much because the data is very coarse and the basis of such a categorization is no longer valid in view of recent anthropological thought.

A number of genetic studies have recently been conducted on the current populations of Pakistan and none of these suggest any such conclusion. The genetic imprint is predominantly "western" since *ca*. 50,000 years ago, with the "mongoloid" (the Hazaras) and African (the Macrons) infusion being post-Harappan. There is no genetic signature of any Austroloid in the current population, unless we designate the Indianspecific haplogroup M as the Austroloid or portoaustroloid. It is surprising that in spite of its irrelevance such a racial categorization is still mentioned so frequently in the literature on the Harappan Civilization. Eventually the study of prehistoric DNA may shed new light on the genetic relationships of specific populations, but so far no well-preserved DNA has been discovered. Even when we do figure out how to trace DNA in ancient populations of the Greater Indus Valley, it will not be possible to use this data to determine the language or religious beliefs of the people that are being studied.

Archaeological finds have also been used to document the mass immigration of 'new peoples' into ancient Pakistan at various times. These data rely on the observation of sudden cultural traits, such as the form of pottery and the art of pottery decoration. This interpretive approach has, however, been questioned. According to modern anthropological thinking, a sudden change in material culture is not necessarily connected with the infusion of new peoples: cultural traits often change indigenously and sometimes abruptly. Anyhow, even if the classical hypothesis is subscribed to, we still do not know who these new peoples were.

Now, where does it all leads us to? It appears that the ethnic and racial make-up of the present day populations primarily derives from the West with a hefty genetic dose from the East (India). This gene flow seems to be gradual, in small quantum at a time but continuous during the ages. Starting from the spread of Homo *sapiens*, a steady stream of different peoples have been coming to this land and assimilating with the preexisting populations. The Harappans were, obviously, a product of this admixture. Who these component peoples were and where did they specifically come from in the prehistoric times, we do not know.

Contrary to all this is the hypothesis, enthusiastically propagated by some Indian scholars, that proclaims that Harappans were in fact the Aryans, especially those who were the authors of the Vedas. The question whether they were indigenous or came from outside the subcontinent being immaterial. Although this hypothesis borders on pure absurdity at the present time, judging from the plethora of writings coming out in rapid succession, it would not be surprising if before long this position gains some degree of respectability or simply gets in fashion to write about.

Archaeological Approaches: Regardless of what is being said about the Harappans and their relationship with the RgVedic Aryans, the characterization of this society is based on the recovery of archaeological evidence alone. This means they are described by their pottery, the types of houses they lived in and the food that they ate. Their origins can be roughly correlated by tracing the development of specific artifact types and tracing the distribution of these artifacts across space (4).

Archaeologists must use a combination of resources to interpret the incomplete archaeological

record. Scientific analysis is used to interpret the nature of specific materials, the technologies used to produce them. Geological models are used to interpret the ways in which the ancient artifacts have been preserved in the soil, and complex archaeological models are used to reconstruct the overall layout of a settlement, the subsistence, and eventually the social and political organization of the people living there. Ethnographic models based on studies of living or historical communities are used to help provide examples of the overall structure of an ancient society. However, none of these approaches can provide a totally accurate or complete picture of an ancient society. Since the archaeological record only preserves a small proportion of the original society, it has its own limitation.

The most difficult aspects of prehistoric archaeological research and interpretation revolve around issues of language and religion. Language and religion are not passed on genetically but are learned behavior that does not always correlate with genetic heritage. Furthermore, without the aid of written records, it is impossible to determine the language used by a prehistoric community. Although we have some short inscriptions from the Indus cities, the writing has not been deciphered and the language that they represent is unknown. Without decipherment, it is not possible to make positive correlations about the meanings of specific symbols or the use of particular artifacts in context of religion. This dilemma has been the source of considerable discussion and dispute regarding the language and religion of the ancient urban culture of ancient Pakistan.

The Indus Age or the Great Indus Valley Culture Tradition: As stated earlier, the Harappan Civilization is the urban phase of a much longer cultural process that began with the development of agriculture and sedentary living in Baluchistan *ca*. 7,000 BC and ended with the demise of the high urban culture *ca*. 2,000 BC. It is instructive to look at the Harappan Civilization in this context, i.e. of the cultures preceding it and of those following it and thereby placing it on the bigger canvass. In this connection, the *Indus Valley Culture Tradition*, has recently acquired some popular currency among some archaeologists, especially with Shaffer (11), Kenoyer (12), and

Indus Tradition: Basic Chronology

Ratnagar (3) to include all human adaptations in the Greater Indus Valley region from around 6500 BC until 1500 BC. Possehl (6) has coined a more elegant term, the *Indus Age*. Both terms, i.e. the Indus Age and the Indus Valley Culture Tradition define approximately the same prehistoric period of ancient Pakistan, more specifically that between the rise of agricultural villages in the seventh millennium BC and the dawning of the Iron Age *ca.* 1000 BC. Both of these terms allow a much wider frame of reference for the spatial and temporal patterns of site formation within the region of the Greater Indus Valley. Both terms are appropriate but the *Indus Age* seems to be preferable as it puts a really long period of time into an organic whole which can then be studied with a sharp focus on its individual components.

The Indus Age can be subdivided into Eras and Phases that allow archaeologists to organize and compare materials from different chronological periods and geographical regions. The term Era as used in this model designates a unit of analysis that does not have uniform fixed boundaries in time or space and more than one Era may coexist within a Tradition. A Phase is the smallest analytical unit, defined by ceramics, architecture and a variety of artifact styles, is limited to a locality or a region and to a defined period of time. It has somewhat fuzzy contours to replace the rigid archaeological ‘periods’ (4,12). Using this theoretical framework it is possible to describe the cultures emerging in

the greater Indus Valley without getting buried with all the data.

The Table below encompasses the entire Indus Age in this perspective. The chronological scheme presented in this Table is basically linear, with pattern of change presented as though they took place simultaneously over vast areas of Pakistan. This is almost certainly not the historical reality of the time.

The Beginnings: The Indus Age, or the Indus Valley Culture Tradition, begins around 7,000 BC during the interface of the Foraging Era with the transition to domestication of plants and animals, but it is important to

Foraging Era 10,000 to 2000 BC understand that the roots of this tradition Mesolithic and Microlithic may extend back even further into the EpiEarly Food Producing Era
7000 to 5500 BC

Paleolithic period, more than a 15,000 years ago. This general date corresponds Mehrgarh Phase to a period at the end of the Pleistocene Regionalization Era 5500 to 2600 BC when this type of transition is known to Early Harappan Phases have been occurring in a broad region Ravi, Hakra, Sheri Khan Tarakai, stretching from northern Egypt and the Balakot, Amri, Kot Diji, Sothi,

Integration Era
Harappan Phase
Localization Era
Late Harappan Phases
Cemetery H, Jhukar,
Fertile Crescent area of West Asia, to Afghanistan and the Indus Valley. Sites that

2600 to 1900 BC
represent these transitional communities are defined by the presence of microlithic

1900 to 1300 BC
tools and other evidence of human occupation, such as accumulations of marine shell, grinding stones and stone alignments.

The Early Food Producing Era: The Early Food Producing Era is represented primarily at the site of Mehrgarh (7000 - 5500 BC), where there is conclusive evidence for the use of domestic wheat and barley and domestic cattle, sheep and goats (13,15). Only one cultural phase (Mehrgarh Phase) has been identified for this Era, but future excavations in other regions may result in the identification of additional phases. At Mehrgarh, small rectangular mud-brick houses were subdivided into rooms and cubicles that could have been used for storage of grain and other necessities. Baskets coated with bitumen have been discovered in the houses and graves. No elaborate ceramic technology had been developed at this time, but the first basket impressed, low-fired ceramics begin to appear at the very end of this phase. Numerous ornaments made from marine shells and exotic colored stones were buried with the dead along with polished stone axes and chert blades. Additional sites that may belong to this Era have been discovered along the edges of the Indus Valley, but have not yet been excavated. Volume II (*A Prelude to Civilization*) of this work gives further details for this stage of human development in the greater Indus Valley.

The domestic animals and plants first used at Mehrgarh, especially humped cattle (*Bos indicus*), wheat and barley became the foundation for the subsistence economy of the later Indus cities. The roots of major technological traditions, such as shell working, stone bead making, chipped and ground stone and even mud brick architecture can be traced to this era.

Regionalization Era: From 5500 to 2600 BC numerous regional cultures emerged throughout the greater Indus region and represent the Regionalization Era (4). This relatively long time period has been subdivided into many distinct Phases on the basis of distinctive pottery, artifacts and chronological occurrence. Most sites reveal the presence of more than one phase. Specialized crafts including ceramics, metallurgy, lapidary arts, glazed faience and fired steatite were developed in each major region. Many crafts using organic materials such as textiles, basketry and woodworking have also been documented. Distinct artifact and ornament styles represented by beads, bangles and decorated figurines evolved in specific regions. Geometric seals were made from terracotta, bone and ivory. The use of prefiring potter's marks and post-firing graffiti on pottery set the foundations for the later emergence of writing. Extensive trade networks were established along the major river routes and across mountain passes to connect settlements to each other and facilitate the movement of goods and raw materials. Trade networks were maintained by emerging elites as well as by mobile traders.

Communities specialized in pastoralism, fishing, foraging and hunting continued to exist alongside the more settled agricultural societies. The later part of the Regionalization Era, often referred to as the Early Harappan Period, represents a phase of formative urbanism. The building of walled settlements, the use of specific types of painted pottery and ornaments, the appearance of seals and rudimentary writing and the expanded trade networks represent the emergence of complex chiefdoms and incipient urbanism. Further details on this time period can again be gathered from Volume II (*A Prelude to Civilization*) of this series.

The Integration Era: The Integration Era (commonly referred to as the Indus or Harappan Civilization as well as the urban phase of the Indus Age) has only one phase (Harappa Phase) that dates from approximately 2600 to 1900 B.C. (4). During the Harappan Phase, there is a synthesis of major regional polities into a larger integrated economic, political and ideological system. A relatively uniform range of pottery styles and other types of material culture including ritual symbols has been found at more than 1000 sites spread throughout the greater Indus Valley. Indus urbanism is defined on the basis of large central cities, which may have held between 40,000 to 80,000 people, surrounded by an irregular network of smaller towns, villages, hamlets and temporary camps of pastoral communities. Most cities, such as Mohenjo-daro and Harappa were built with fired brick, while Dholavira in Kutch was constructed extensively with shaped stone combined with mud brick. Smaller satellite settlements were generally built with mud brick. Most Indus settlements had north-south and east-west oriented streets with brick lined drains for disposal of wastewater.

A formalized writing system, the Indus Script, was inscribed on pottery, seals and a wide range of other types of objects. Although the script is not yet deciphered the context of its use indicates that it is connected to the establishment of powerful communities who dominated Indus society. Alternatively, the seals, on which these inscriptions were carved, could have functioned as amulets and talismans. The use of standardized weights and measures indicates the presence of trade. Hierarchical social order and stratified society is reflected in architecture and settlement patterns, as well as artifact styles and the organization of technological production.

The main domestic animals were cattle, sheep and goat with some use of water buffalo. The domestic horse (*Equus caballus*), donkey (*Equus asinus*) or Bactrian two-humped camel (*Camelus bactrianus*) were used in isolated sites in Northern Afghanistan and Central Asia by around 3000 BC, but they were not found at the Harappan site of Shortughai in Afghanistan or other Indus sites. Furthermore these animals were not depicted in Indus art or figurines. All three animals are only found in the Indus Valley after 1900 BC at the end of the Indus cities. The first confirmed use of horse and camel for riding is found in the latest levels of Pirak, a small site in the Kachi plain (16,17). Between 1800 - 800 BC elaborately decorated camel and horse figurines with riders were being produced at Pirak. Further details on the material culture of the Harappan Civilization are available in Volume III (*Harappan Civilization - The Material Culture*).

The Harappa Phase represents the first state-level political organization, but no single settlement dominated the region and there is no indication for the emergence of hereditary monarchies or highly centralized territorial states (4). There is a conspicuous absence of central temples, palaces and elaborate elite burials that are characteristic of other early urban societies in Mesopotamia, Egypt and China. Although massive mud brick walls surrounded most large settlements, there is no evidence for burning or destruction of the cities as was the case during major conflict or warfare in other early civilizations. This does not mean that the peoples of the Indus cities were a “peaceful” society, but that conflict may have taken place on a relatively small scale and not in the major cities or towns.
be discussed in Section IV of this volume, here we introduce the subject in outlines.

Sociopolitical Organization: Despite a lack of any written account, significant strides have been made to understand the and religious organization of the Harappan Civilization. During this phase a large number of urban settlements were established, some of which we can safely identify as cities and some as towns. These were surrounded by a larger number of villages which were occupied by large and small farming communities. It is assumed that the Harappan urbanism and the pattern of the settlement greatly favored a stratified society made up of occupational

Some scholars have tried to equate the classes. Other determinants which supported these structured socia-political and economic orders were specialized crafts, use of seals and writing, standard weights and various types of occupational specialization. We shall take up this subject in some details in Section I. of this volume.
Urban Phase (or the Harappan Civilization) with the Vedic period, but as is clear from the more detailed discussion subsequently in this volume (Section V) we do not have any evidence, linguistic or archaeological, that would allow us to correlate the Vedic communities with the archaeological remains of the Indus. Furthermore, the types of artifacts and the nature of the settlements does not correlate to what is described in the *RgVeda* or other Vedic texts.

The Localization Era: The Localization Era is a period of cultural transformation connected with changes in local environments, sociopolitical organization, changing population distributions and settlement patterns (4,18,19). The urban centers decrease in size or entirely abandoned. The same fate befalls agricultural villages and pastoral camps. Other regions showing increasing numbers of smaller settlements and there are strong indication of population movement eastward. The urban economic and political structures and associated artifacts such as inscribed seals and weights disappear. Beginning around 1900 BC, this transformation continues until around 1500 BC and overlaps with the Regionalization Era of the so-called Vedic Age. The major Phases identified for this Era represent the emergence and consolidation of localized states or chiefdoms with smaller scale

social and political interaction. As the cultural regions became disconnected, the unifying styles of artifacts of the earlier Indus cities disappeared. Major changes occurred in burial practices and painted pot (20).

During this period, literary sources indicate that Indo-Aryan languages and Vedic ideology and culture were spreading throughout Pakistan. The roots of later religious traditions, such as Hinduism, Jainism and Buddhism, were probably also beginning to form at this time. In contrast to these changes, earlier Indus techniques of farming and herding continued to be used along with many of the technologies, such as ceramics, bead making, shell working and metallurgy. New technologies that emerge at this time include higher temperature kilns and glass bead making. Some of the theoretical issues of these subjects are to

The earliest large-scale urban society in South Asia emerges during the Harappan Phase of the Indus Valley Culture Tradition, 2600-1900 BC. This society has been defined as a complex chiefdom by some scholars (11), and a state level society by others (21). Although these terms have significance for living societies, it is unlikely that these differences can be easily identified archaeologically and many scholars prefer to focus on the questions of hierarchy and heterarchy. Hierarchy refers to the ranking of elements in society using specific criteria, such as size, complexity, power. Heterarchy refers to the relation of elements to one another when they are unranked or when they possess the potential for being ranked in a number of different ways (22). Generally speaking complex chiefdoms have one large settlement and only one or two levels of smaller satellite towns or villages. State level society, as gathered from the situation in Mesopotamia, tends to be more stratified, with four or more tiers of settlements with multiple large settlements competing for political and economic power. Stratification in state-level society is also seen in political organization, in economics and in social structure, at least this the orthodox view of those scholars who are steeped in Near Eastern archaeology.

The archaeology of the Harappan Civilization is quite different from that the Near East where most of the early research has been undertaken. Due to the large geographic area and the many different sizes of settlements associated with the Indus civilization, it is more appropriate to consider the larger Indus settlements as representative of state level society, with some of the smaller regional centers in remote areas possibly representing chiefdoms. The largest cities, such as Harappa, Mohenjo-daro, Rakhigarhi and Ganweriwala may have been relatively independent city-states with direct political control only over local settlements and lands. Several competing classes of elites would have been present in these urban centers; merchants, ritual specialists and individuals who controlled resources such as land, livestock and raw materials. These elites and their supporting communities probably maintained different levels of control over their respective regions. During the 700 years of the Harappan Phase (the Harappan Civilization), the structure of political control appears to be relatively decentralized. There is also no indication of territorial states that competed with each other through military conflict.

Separate walled mounds with associated suburbs at both Mohenjo-daro and Harappa suggest that these two cities had similar hierarchies of competing political and socioeconomic classes. While it is not impossible that a single community of elites with strong kin ties controlled both cities, it is highly unlikely that a ruler in one city dominated all other cities. In fact, regional differences in artifact types and city layout suggest that each of the Harappan cities had an independent community of ruling elites. No single building or group of buildings dominated either site. The political organization was

probably not a hereditary monarchy, where one would expect to see palaces, royal storehouses and royal tombs. On the contrary, the presence of numerous large buildings and public spaces in the Lower Town at Mohenjodaro and Mound F at Harappa support the interpretation that there were several distinct elite groups living in the cities. One clear exception to this pattern is seen at the site of Dholavira in Kutch. A set of three nested walled areas with a dominant citadel that had four major gateways suggests that the political organization of this settlement may reflect the dominance of a single class. It is possible that this city was a small kingdom.

Earlier generalizations about uniformity in artifacts over the entire Harappan realm have stressed the authoritarian nature of Harappan culture, but most of the uniformity can be explained through the presence of a common belief system or conservative ideology that required specific symbols and artifacts for ritual purposes as well as for defining class affiliations. These symbolic objects also would reinforce the hierarchy of the society and help to legitimize the socioeconomic and political order. The role of kin related learning processes and the diffusion of craft specialists from specific communities to all the major settlements is also an important mechanism for maintaining uniformity in technologies as well as style.

Fluctuations in dominance between the communities on each of the mounds probably contributed to the economic development and the rapid build up of the city as a whole. New suburbs with associated craft areas may have resulted from growing populations within the city and the agglomeration of new populations to the city. Similar patterns of competition between elites within a city-state are well documented in the Early Historic states. The widespread distribution of Harappan Phase settlements may reflect a process of expansion and colonization through competition and fission among the ruling elites from the core regions of the Indus Valley. A site like Dholavira, or any of the smaller walled settlements in Kutch, the Punjab, Baluchistan or Afghanistan could represent such outposts or colonies. In contrast to the core area cities these outpost settlements may have supported only one dominant elite community along with the necessary support classes comprised of laborers.

Indus Religion: Religious practices and beliefs in the Harappan phase are represented in symbols and narrative scene depicted on seals, pottery and other objects. The most important narrative scenes show sacrifice and worship. The worship of spirits or deities in trees suggests that most rituals were carried out in the open or at the foot of a sacred tree such as the banyan, pipal or acacia. Terracotta figurines of possible horned male deities and elaborately decorated females may represent deities or worshippers, even shamanic figures. Stone sculptures of male figures who are sitting on one bent leg, with the other leg bent in front have been widely referred to as representing deities or priest-kings but the specific kneeling posture on some tablets suggests a supplicant rather than a deity. Abstract symbols such as the swastika and endless knot motifs, and other enigmatic symbolic objects are also thought to reflect ideology, but their precise meaning cannot be known without the aid of readable texts.

Harappans do not seem to have a ‘state religion’ or socio-ritual belief system. There is, however, strong indications for animism and shamanism, the belief systems of hunter-gatherers and early argo-pastoral societies. The use of amulets and talismans seems to be quite common. The religion of the Harappan Civilization is the hot topic of the day. We shall continue this discussion in some details in Section II. For the time being it suffices to say that the Harappans probably had no organized religion but lived through animistic beliefs and a collection of shamanic practices and magic.

Indus Writing: The origins of the Indus writing system can be traced to the Early Indus period, *ca* 3300-2800 BC, at sites such as Harappa (23), Rehman Dheri (24) and MehrgarhNausharo (25). Once it became fully established the Indus writing system spread to all parts of the Indus Valley. The Indus script has not yet been deciphered but some of the pictographic signs can be understood contextually. Most inscriptions are extremely short, consisting on the average of about five discrete symbols and the longest inscription is 26 characters.

The language represented by the writing cannot be determined until the script is deciphered. However, the analysis of non-Indo-Aryan linguistic elements in Old Indo-Aryan languages (26) and studies of place names (toponymy) that may indicate the presence of early linguistic communities, it appears that more than one language may have been spoken in the greater Indus Valley (27). For example, rivers in Sindh and Baluchistan have names that can be attributed to Mundari or Dravidian languages even though there are no modern speakers of these languages in the region today. In the Punjab and Afghanistan, the rivers have Indo-Aryan names, while further to the North the names become TibetoBurman or some other language. There are also a few common words of Mundari origin, such as *munda* (boy) and *kurhi* (girl), in Panjabi. It is more than likely that many language families may have been present in the Indus region, including Dravidian, Austro-Asiatic, and Indo-Aryan (26). On the basis of some evidence, although indirect, the languages spoken in the northern part of the Valley, that is, in the Pashtun country and Punjab, seems to be related to the Indo-Aryan language family.

The Indus script occurs on inscribed steatite seals and various types of tokens or tablets, or as graffiti on pottery. How such a script was used is unclear. The general opinion is that the inscriptions would have been used to identify ownership of goods or economic transactions, accounting, the recording of sociopolitical or ritual events. For many reasons, to be discussed in Section III, this explanation does not seem to be logical. Steve Farmer, Sproast and Witzel (28) believe that the Indus inscription did not represent speech. They consider these inscribed objects as amulets and talismans or some form of nonspeech communication symbols. This opinion is, however, debatable. We discuss this controversy in Section III.

Decline and Fall of the Indus Civilization: By 1900-1700 BC the Harappan Civilization started to decay and soon, probably around 1700 it all came to an end. The state level organization of the Indus cities appears to have been reduced in terms of scale, although the continued existence of some settlements, including Harappa, may indicate that population at large continued to thrive under different soicio-economic order (18). Large cities and towns were drastically reduced in size but a number of new, although much smaller, settlements appeared. There was general shift of population eastward.

The factors leading to the decline of the Indus cities are believed to be highly varied depending on the region. For example, there is evidence for flooding at sites such as Chanhu-daro in Sindh and Lothal in Gujarat, but not at Harappa in the Punjab. The drying up of the GhaggarHakra would have been devastating for the people of Cholistan, but the Indus and its tributaries did not dry up and people continued to live along their banks. Overgrazing of the land, or continuous agriculture without the use of fallow cycles could have exhausted the fertility of the land. The widely extended trade and political networks would have been seriously impacted by minor changes in economic productivity, as well as by the overcrowding in cities due to the drying up of the rivers or unpredictable annual flooding. There is no evidence for violent conflict in the Indus cities during the late phase of occupation, though there may have been increased banditry along trade routes and outside of the

cities. The encroachment and raid of barbarians living on the peripheries of civilization has been a common phenomenon in historic times all over Eurasia. This could be happening on the peripheries of the Indus Valley as well. The small scale raids of the Vedic people, as evident from the RgVeda, gives this scenario some credibility. We shall take up this subject in Section IV.

The decline and fall of the Indus Civilization paved the way for the emergence of a few nonurban cultures. They have been discussed in some details in Volume III (*Harappan Civilization - The Material Culture*). Here we offer a summary.

In parts of Pothwar, Punjab and the Divide, this period is dominated by the Cemetery H culture. Although no large horizontal excavations have been made, settlement patterns suggest the continuation of two tiers settlement hierarchy without any sign of urbanism. Distinctive painted pottery with black designs painted on red slip indicate a widely shared symbolic painting style and technological tradition. One of the most important changes seen during the post-Harappan period is the breakdown of long distance trade between the Indus Valley and the Northwest, as well as the Southern coastal regions. This interpretation is based on the absence of marine shell ornaments and the disappearance of distinctive stone drills for perforating hard stone beads. There also appears to be a decline in access to specific stone resources such as lapis lazuli from northern Afghanistan and carnelian from Kutch. The breakdown in long distance trade may have stimulated innovations in faience and glass making, as well as new bead drilling techniques for hard stone. Faience was used to create deep blue beads that look like lapis, and glass was used to make shiny red-orange beads that look like carnelian. Faience was also used to make white beads and pendants that look very much like shell.

The changes in painted pottery styles and the inclusions of these pottery vessels in distinctive pot burials, suggests that the post-Harappan elites had significantly different beliefs from the previous Harappans. However the change in pottery styles and burial practices was quite a gradual change, and the importance of specific colors of beads, regardless of the actual material being used to manufacture them, suggests a continuity in many aspects of ideology and taste. These changes seem to have been gelled into a few discrete archaeological ‘cultures’ or phases of postHarappan Cultural Tradition.

Jhukar Phase refers to the post-Harappan southern cultural tradition found in the final Harappan levels at the sites of Jhukar, Mohenjodaro, Chanhu-daro and Amri. Jhukar culture is identified on the basis of distinctive pottery with black painted designs on red and cream slip, and distinctive geometric stamp seals. Some of the material culture shows continuities with the preceding Harappan phase, but chert weights and Indus writing is no longer present. Jhukar circular seals are also found at the site of Pirak. The distribution of Jhukar style artifacts throughout the southern Indus Valley indicates extensive regional exchange, possibly as far as the site of Gilund to the East. However, the lack of Jhukar pottery at Harappa, or other sites in the North, seems to demonstrate the lack of major long-distance trade. Many of the Jhukar sites in Sindh were eventually abandoned around 1700 BC and not re-inhabited until the Early Historic period around 500 BC or later.

Another Late or post-Harappan culture from Baluchistan is seen at the site of Pirak on the Kachi Plain, which can be dated from 1700-700 BC (16) or 2000-1300 BC (11). Many of the architectural styles and even pottery styles appear to reflect indigenous cultures that had been in the region since before the Harappan period. Square and circular stamp seals with geometric designs are similar to

earlier forms from Mehrgarh and Nausharo, and have parallels with Jhukar seals from the Late Harappan period. The introduction of rice and the presence of horse and two humped Bactrian camel figurines along with riders at Pirak indicate new forms of subsistence and transportation.

Very little can be said about the social or political system, but isolated burials sometimes associated with horse burials may indicate the presence of semi-nomadic tribes or chiefdoms. The use of horse and camel can be linked to Afghanistan and Central Asia. The association of horse with Vedic culture has led some scholars to see Pirak as evidence for intrusive communities entering the Indus Valley from the Northwest. However, it is important to note that the pottery and figurine styles of Pirak are restricted to Baluchistan, and do not spread to sites in the Indus Valley. This suggests that the cultural tradition of horse using people represented at Pirak did not spread to the Punjab or to the Ganga-Yamuna doab and therefore cannot be linked to the Vedic society. However the use of the horse may have spread without any accompanying pottery either from Baluchistan or from a more northerly route associated with the Gandhara Grave Culture discussed below.

In the northern Indus Valley, particularly the isolated valleys of Swat, Dir and Chitral, the Gandhara Grave culture (1700- 200 BC) is represented by small settlements and associated cemeteries (29). The society appears to have been organized as a hierarchical chiefdom with some individuals being buried with large quantities of burials goods, while others had only a few pots. Most of the pottery with these burials is burnished grey wares that are very different from pottery made in the Indus plains. Horse burials associated with inhumations at the site of Katelai in Swat may represent high status individuals and special rituals associated with their death (30). On the basis of the horse burials and certain artifact styles, some scholars have associated the Gandhara Grave culture with Indo-Aryan or Vedic culture, but without written texts it is impossible to confirm this linguistic affiliation. Recent discoveries of cist burials in the Salt Range may indicate that the Gandhara Grave culture extended as far as the northwestern Punjab, but it does not appear to have spread further to the South or the East into the Eastern Punjab, which is often touted as the core area for the later Vedic tradition.

In Gujarat, the Late Harappan period is characterized by relatively dispersed small settlements with no large regional centers (19). In Kutch the number of Late Harappan sites declines dramatically in contrast to the numerous small sites and regional centers of the Harappan Phase. In Saurashtra and mainland Gujarat Lustrous Red Ware sites are dispersed along major watercourses or wherever water sources were combined with seasonal grazing. The disappearance of characteristic features of Harappan material culture, such as seals and weights, indicates a general breakdown of social order. However, other features of material culture do continue, including some pottery and ornament styles. Lustrous Red Ware pottery, which was being used along with Harappan pottery during the final stages of the Harappan culture, continues until around 1400 BC. The Lustrous Red Ware pottery is also often found in association with a style of pottery referred to as Black and Red ware which has strong cultural affinities to peninsular sites. The Late Harappan settlement patterns in Gujarat and changes in material culture reflect the gradual breakdown of the earlier Harappan state organization and the decentralization of political power. After 1400 BC there is a break in the archaeological record at most sites until around 600 BC when another diagnostic style of pottery appears. This is the distinctive Northern Black Polished Ware that is associated with the Early Historic Period.

A Corruption of history - Mythmaking at Harappa: A large number of scholars of India, trace the origin of the present-day Hinduism to the RgVeda, a collection of laudatory and supplicatory hymns composed by the Vedic Aryans in eastern Afghanistan, the Pashtun country of western Pakistan, and

the northern river basin of the Indus (Punjab) with the result that the RgVeda has become one of the primary Hindu scriptures. These compositions have provided some of the presentday scholars with a basis to construct several bizarre fantasies that are particularly projected on the Indus Civilization. Nearly all of these fantasies in some way involve the Indus script on the seals; the pipal leaf motif on the Harappan pottery; and the water tanks, such as the Great Bath at Mohenjodaro. If it is not enough, then some elongated stones are pulled up at some Harappan sites and designated as the “Shiv linga”. Some of these Hindutva archaeologists would even bring forth the domestic hearths from a few Harappan settlements (all of them in the present-day India) and fantasize about them as the “fire alters” for the veneration of Agni. This mythmaking, aided and abated by the state, sponsored by the academia, and propagated by the midia is presently a national passtime in India. These “incontroversial archaeological and textural proofs” are even being happily taught in schools and colleges throughout India.

The pride of place is given to the equation: The Harappans = The Aryans. A view is being assiduously propagated of late that the "Aryans" are the true authors of the Indus culture, that the Indus and Vedic cultures are identical, that the Indian culture derives from the Indus Civilization. Furthermore, the Vedic Age began in the fourth, even fifth, millennium B.C. thus making the entire Indus Civilization a minor chapter in the greater “Vedic Civilization”. A second view, which is in deed integrally connected to the view just above described, and which is being propagated equally assiduously, is that the Ghaggar-Hakra River braids that drain the Siwaliks was actually the mighty river Saraswati to which the Rigvedic bards composed so many poetic songs and which the Vedic seers elevated to the status of a goddess. According to this mythmaking, then, the Indus Civilization should more appropriately be called the Indus-Sarasvati Civilization, better still Sarasvati-Sindhu Civilization, or still better simply Sarasvati Civilization. Although the tide of this national frenzy is difficult to stem, in the interest of the Indus history we chose to discuss this mythmaking at Harappa in Section V.

An Overview of the Harappan Material Culture: As stated in previous pages, our knowledge about the Indus Civilization is derived almost entirely from archaeological research. This knowledge has advanced considerably since Charles Masson first reported the vast mounds of Harappa in 1826. A valuable mass of information relating to town planning and architecture, art and crafts and the way of life of the Harappans emerged between 1924 and 1929 from the description of artifacts and from inferences drawn from them. Most of this work was, however, centered around the Indus cities, such as Harappa, Mohenjo-daro, Chanhudaro, Balakot, Lothal, Kalibangan, etc., at the expense of villages and settlements of subsistence economy. The subsequent excavators followed almost the same trend and exhibited the same interest in bricks and mortar, the seals, the script, the figurines, and the like. The settlement pattern, the direction of expansion, village-town interaction, city-hinterland relationship, means and relationships of production, and the impact of the Indus legacy on subsequent development of the region were largely neglected. Fortunately, these are the areas where much of the research efforts are presently being expended. However, these areas of research are relatively new and there is not much accumulated data yet available on the subject. As a consequence, therefore, the Indus Civilization is still described largely in terms of cities and towns. A number of accounts, some in book-lengths, are available on the material culture of the Harappan Civilization. These have been consolidated in Volume III (*Harappan Civilization - the Material Culture*) of this series, wherein an extensive Bibliography is also available. Here we attempt an overview with only essential details, especially those that could be of some help in following the theoretical discussions that follow.

The Mature Harappan period was marked by extensive construction of houses in skilled brick

masonry, by thick walls that encircled several settlements, brick-lined wells, storage structures and other buildings, and by bipartite urban settlements with high places of power, and lower but more extensive residential areas. There was a characteristic thick and sturdy pottery. Specific forms of bronze tools such as curved razors, chisels in various sizes and shapes, and flat axes occur across the sites. At the same time there is a remarkable paucity of distinctive tool types in ground stone and flaked stone which are a common feature of a post-Neolithic culture elsewhere.

An imaginative terracotta art depicting all kinds of animals as well as people offers much scope for sensitive interpretation. Seals give evidence of another level of artistic creativity. These are shaped for easy handling and have rectangular faces carved with pictorial symbols and writing. Other characteristic elements are beautifully cut and polished cubical stone weights that were only one part of a uniform weighing system; marine shell and ivory with multiple uses; domestic artifacts; baked clay missiles balls and flat ‘cakes’ for paving floors and for heat retention at fireplaces; and ornaments made of faience, bronze, silver, gold and semiprecious stones of attractive colors. Culturally significant is a logographic system of writing.

Among other features that make the Harappan Civilization unique in the third millennium world of the Bronze Age are the long distances that the Indus materials reached. A unique technological advance was water harnessing on an unparalleled scale with probably hundreds of wells sunk, say, twenty meters deep, in the city of Mohenjo-daro, Harappa, Allahdino, and other sites. Artificial lakes or tanks were constructed widely and the remains of some of them have been found. The abundant water supply to habitations - we may recall the frequency with which paved bathing floors occur in Harappan houses
- would have served not only personal and domestic needs but also, probably, ritual performance. There are no temples; the only building identified with some degree of certitude as a religious unit is the Great Bath of Mohenjo-daro, its floor so well paved that we cannot doubt that it held water. Planned water supply to the residential area entailed, in its turn, a system of carrying away used or wastewater from the houses. This street drainage system of Mohenjo-daro and other Harappan cities is unique to the ancient world indeed.

The high degree of technological achievements of the Indus people during the Harappan period can be seen in the cutting, polishing, etching, and drilling of the very long carnelian beads, the preparation of metal alloys, especially bronze, the possible use of lost-wax casting, the quality of the carving of square stamp seals, the manufacture of high quality faience, and finally the preparation of very high quality ceramics. Equally apparent is the sophistication of the Harappan engineering. The building and maintenance of Mohenjo-daro and Harappa is a sufficient testimony to this skill, with the maintenance of the grid town plan, the elaborate drainage system that would have had to be regularly re-leveled as the contours of the city grew and changed, the digging of wells on a massive scale (estimated to be 700 at Mohenjodaro alone), the engineering and architectural sophistication of the Great Bath as well as the ordinary residential housing. Of course, the making of standardized bricks and the construction of large kilns to fire them speak for itself.

A special feature of Harappan citizens is their keen interest in pyrotechnology, the knowledge of fire. Making of pottery and glazing or coloring it in diverse effects is one aspect. Production of lime plaster, and making and manipulating of faience into desirable objects are some of the other objectives which depend on pyrotechnology. Extracting copper from the copper ore, alloying it with tin, lead or arsenic to make bronze, and forming it into diverse objects of utilization and art are the

very basis of Bronze Age of which Harappan Civilization was a part.

The widely diffused use of a uniform script, and the extent of trade itself indicate that there must have been an all-embracing and well organized network of communication, both between the cities of the Indus world and beyond to other major centers of civilization. This implies the use of pack-animals and the organization of caravans, and the presence of further specialized groups to carry out this function. Recent evidence suggests that such communities may have been clearly divided, in terms of their way of life and domicile, from those who inhabited the major settlements of the plains, perhaps as pastoral nomads or seminomads, not unlike the modern *Pawindahs* who combine with their nomadic and pastoral way of life a major role in the trade of Afghanistan and the Indus basin. The cultural uniformity of the settlements over such a wide area leaves no doubt that the relationship between the city-centered communities of agriculturalists and craftsmen, and those who provided the means of transport and communication, must have been a stable one. This in turn indicates a strong and firmly based political system which held them together and maintained their relations. Precisely what this system was and whence it drew its authority is not yet clear, but of its existence there can be no doubt, nor that it represented a special achievement in the world of the third millennium B.C.

There is growing evidence of the extent and variety of trade. First, there are the 'granaries' or warehouses at Harappa, Mohenjodaro and Lothal, implying great concentrations of wealth, and possibly the government’s involvement in trade. Next, there is the evidence of unprecedented trade in goods produced within the Indus culture region, such as the artifacts of stone, metal, shell, etc. Third, there is the widespread trade with distant parts, both in the form of exports to Mesopotamia and of the trading 'colony' at Shortughai, in northern Afghanistan, or in the form of other exotic imports. As we have seen in Vol. II (*A Prelude to Civilization*) of this series, this aspect was already preexisting, and contacts with Central Asia for such purposes went back several thousand years, even to the pre-ceramic Neolithic of Baluchistan. In the new context of the Indus Civilization it was evidently more sophisticated and more highly organized than ever before. This is shown by the presence of regulated weights and measures, and of elaborate and well made seals which were probably used for trading purposes. Finally, we must remark that the use of a uniform script (which seems to be the inescapable inference we may draw from the distribution of the seals and inscriptions) and of a uniform mythology and iconography, over so vast an area, are still and must remain sources of real wonder.

Some communications within the Indus region were over land, using bullock carts for short journeys and the animals of pastoral nomads as beasts of burden over longer distances. Bulky goods, however, were more easily transported by water, along the rivers and around the coasts. Many of the raw materials needed by the Indus people could be obtained in the regions controlled by the Indus civilization: flint from the Rohri Hills, carnelian and agate from southern Gujarat on one hand and from Baluchistan’s hills on the other, gold dust from the upper reaches of the rivers, timber from northern Punjab, and clays from most areas, while textiles could be made from the cotton grown by the farmers, possibly wool from the pastoralists' sheep, and probably the hair from their goats, as well as leather. Other materials were obtained from the inhabitants of neighboring regions: copper and possibly tin ores from several locations in Baluchistan and Afghanistan, ivory, honey, and other forest products from the huntergatherers who ranged through the arid areas between the rivers.

In the early third millennium, the inhabitants of the Indus region had participated in the trading networks that operated across the Iranian plateau. With the emergence of the Indus civilization, however, came a major change. Seagoing boats were now constructed and Indus merchants sailed

through the Gulf to trade directly with the inhabitants of Oman and eventually with Bahrain and the cities of southern Mesopotamia. While there is little evidence of the ships themselves and nothing is known of their antecedents, the fact that Indus merchants are known to have traveled to Mesopotamia, while Mesopotamian ships did not venture outside the confines of the Gulf suggests that the development of seaworthy vessels was an Indus innovation. According to some opinions, the present-day Arabic word *Mallah* (the sailor) derives from *Meluhha* by which name the Indus people were known in the Gulf.

The Indus people also established a trading outpost at Shortugai in Afghanistan, allowing them to monopolize the supply of lapis lazuli to Mesopotamia. Many settlements in this region and in northern Iran have yielded Indus material. But while the Mesopotamian texts attest to the importation of a range of Indus raw materials, and Indus beads are well known from Mesopotamian excavations, it is difficult to establish just what the Indus people obtained in exchange.

We may envisage throughout the period a continuing growth of population, no doubt linked to an outward expansion of the Indus life-style, and resulting in a variety of encounters with other cultures. In the central regions, the Indus culture appears to have completely taken over all aspects of urban life, though in some peripheral centers local Early Indus cultures continued to exist alongside, or in combination with that of the center. In each region the situation appears to have been somewhat different, and at present we do not know exactly what was involved - military conquest, colonization, or economic and ideological takeover.

The Harappan cities were supported by a large number of agricultural villages: more than 1,000 sites have so far been identified but few of them have been excavated. So far, the Indus cities have attracted much of the attention of archaeologists and the study of the agricultural communities which sustained these urban centers have gone begging. Similarly, far too little is yet known about the nomadic or semi-nomadic communities who must have then, as now, lived on the periphery of the plains, breeding cattle and other livestock, and no doubt providing transport for trade and communication. At the present moment we have no idea how much of the population was centered in the cities, and how much was dispersed through the villages or simply existed as nomads.

There are many indications that by the time of the Harappan period, the Indus society had evolved into considerable social stratification and division. The varied and often highly specialized crafts alone indicate this, and some scholars have seen in the variations of house sizes and the localization of blocks and barrack-like dwellings further evidence of class divisions, perhaps even amounting to serfdom. Whether we should speak of class divisions, or rather of something akin to the later Hindu caste system, is also worthy of consideration. Besides craft specialists and artisans there must have been an agricultural population, whether living wholly in villages or also in part living in the 'cities'. There must also have been a ruling group who have generally been supposed to have combined the roles of administrators and priests.

The uniformity of the Harappan material culture has been frequently commented on as one of the unique features of the Harappan Civilization. It has been noted that while the earlier phases of the Bronze Age cultural complex show varying patterns in different geographical regions of the Greater Indus Valley, the Harappan Civilization imposes a certain uniformity in its basic cultural manifestation and hence there is little difficulty in identifying the urban pattern associated with it. Notwithstanding this cultural uniformity, we find manifestations of regional variation within the

Harappan region itself and at least three such regional variations (32) can very distinctly be identified.

Regional surveys have built up a general picture of the distribution of Indus sites and their relationship to the landscape. For example, Harappa was found to be virtually the only Indus site in the western Punjab, suggesting that Harappa's situation could relate to its importance in trade, particularly in timber from the Himalayas, and pointing to the essential role of pastoral nomads, then as now, in providing links between settled communities. Studies by Possehl of the pattern of settlement in the Saurashtra region revealed major changes in land use through time, with the Indus settlements concentrated along the rivers and a great increase in settlement in the post-Harappan period as farmers began to occupy the interfluve areas. Intensive surveys by Rafique Mughal in Cholistan, where Stein and others had previously located a number of sites, revealed a great concentration of settlements along the dried-up course of the Ghaggar-Hakra (the 'lost Sarasota') river, showing that this region, though now desert, was one of the most densely settled areas in Indus times.

Despite this, to some scholars, the Indus civilization does not appear quite as spectacular as the Egyptian, Mesopotamian or the Chinese; it has not yielded treasures of jewelry, gold, and vessels on any comparable scale. The Indus religious thought and practice apparently had no place for ambitious funerary structures like pyramids for the burials of sumptuous offerings for the dead. Neither did the Indus religious life entailed the construction of richly appointed temples. However sumptuous the lifestyle of the Harappan elite, the archaeological record does not reflect. Another feature which puts the Harappan Civilization at second tier to that of Mesopotamia and Egypt is the conspicuous absence of art; only a few statues have been discovered of which the 'dancing girl' and 'priest king' are well-known.

Cultural Traditions in the Neighborhood: While the Harappan Civilization was developing in the greater Indus Valley, similar changes were also taking place in the neighborhood, especially in the West.

Helmand Tradition: Situated to the west of the Indus Valley, the Helmand Tradition of Afghanistan represents a parallel urban state level society that was roughly contemporaneous to the Indus cities. The integration of this region into complex chiefdom or state level society can be dated from around 2800-2300 BC (Shahr-i-Sokhta Phase). Unlike the Indus cites, sites such as Mundigak and Shar-i-Sokhta reveal centralized monumental architectural structures that have been identified as palaces. Although it is not certain if these settlements were ruled by kings or simply by a dominant clan, they appear to have been politically and ideologically different from Indus cities.

Bactro-Margiana Tradition: The emergence of complex chiefdoms or hierarchical state level society is seen in the Kopet Dagh, in Central Asia from around 2800-2100 BC. Settlements were surrounded by a strong mud brick fortification wall with defensive gateways. Increased status differentiation is seen in burials and elaborate styles of ornaments and tools were produced by local craft specialists. From 2100-1900 BC interaction with the Indus Tradition is documented, but it does not represent a major cultural impact between the two regions. The final phase of Central Asian integration (also referred to as the Oxus civilization) lasts from 1900-1500 BC and is called the BactroMargiana Archaeological Complex - BMAC. This tradition appears to encompass much of Baluchistan and the area previously dominated by the Helmand Tradition, and even extends out onto the Kachi Plain near Mehrgarh. Heavily fortified towns with multiple concentric walls and complex multiroomed

structures were constructed using mud brick. Although each fortified site may have been a separate political unit, similar to historical warlords or “khanates”, almost identical styles of ornaments, seals and tools were being used by elites in each of the settlements. Many of these distinctive objects have been found at sites in the Indus Valley, primarily during the time between 1900 and 1750 BC. The presence of these Central Asian artifacts in the Indus Valley sites indicates that there was considerable trade and the movement of people to and from the highlands.

The emergence of stratified society is assumed on the basis of burials with large hoards of gold and ritual objects that have been found in Central Asia and Baluchistan. Graves with less opulent grave goods have been found at the edges of the Indus Valley in the Kachi plain. The pottery, stone or faience ritual objects are broadly similar to those found in Central Asia.

The culture that is represented by these burials disappears around 1750 BC in the Indus plain and by 1500 BC in the western highlands. Although many scholars have proposed that the Bactro-Margiana region was inhabited by IndoAryan speaking communities, there is no linguistic evidence to support this. Even if these communities did speak Indo-Aryan languages and practice Vedic style sacrifices on fire-alters, there is no indication that political or military leaders from Bactria or other regions of Central Asia invaded the Indus Valley and established a new cultural tradition in this area despite the evidence of other forms of contact.

Cultures in the East: During the entire Indus Age, the area to the east of the Indus Valley was largely inhabited by hunters and gatherers with only marginal signs of agriculture and pastoralism, and that too in the borderline areas between Pakistan and India. It was during the decline and fall of the Harappan Civilization that the GangaYamuna River Valley and the Vindhyan plateau to the South, showed some clear signs for the emergence of food production and scattered agricultural settlements. These settlements were probably organized as chiefdoms and the most powerful of these were located at crossroads and along the trade routes that linked the Gangetic plain to the Vindhyan region and to the Deccan plateau in the South. The social or political organization of these settlements is relatively unknown. Distinctive pottery and artifact traditions indicate that regional cultures were becoming established and there is a continuity of development that links these Chalcolithic and early Iron Age settlements to later polities and city states that are documented in literary traditions.

During the post-Harappan period, *ca. ca.* 1000 BC. None of borderline communities developed into state level societies, but some sites such as Inamgaon, Balathal and Gilund may represent regional centers (31) and were possibly organized politically as chiefdoms. The main evidence for chiefdom level society is the presence of both large and small sites that indicate a settlement hierarchy. Regionally defined ceramic styles, craft specialization and regional trade networks are also important indicators of social complexity.

The social and political transformations occurring between the prehistoric and the historic period are quite complex and cannot be explained using simplistic models of invasion or migration that were used by archaeologists and historians in the past. The sources that provide information on this period include the archaeological record, narratives from the Vedic texts, and linguistic evidence from the textual sources.

Archaeological evidence indicates the emergence of new regional cultures in the IndoGangetic divide, the Ganga-Yamuna Doab, Gujarat, Malwa-Rajasthan, the Vindhyan and Deccan regions. The most widespread pottery traditions in the northern India have been identified as the Painted Grey Ware

Culture (1200-800 BC) and Painted Grey Ware Culture (1200-800 BC) and 300 BC). Small villages grew into large fortified towns, many of which can be identified in the literary texts. New technologies were being created alongside older technologies and subsistence systems. Rice and millet agriculture became widespread in regions watered by the monsoon rains, the use of iron tools and the horse became commonplace. Geographical and cultural areas that were once core and periphery from the perspective of the Indus cities become reversed with the establishment of new political centers in the Ganga-Yamuna region and the northern portion of the Indus plain between Taxila and Peshawar. Narratives from Vedic texts provide information on material culture and social organization used by Vedic communities in religious rituals, but it is difficult to define historical chronology or precise geographic locations.

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SECTION I

Social and Political Organization

I.1. Complex Societies, Urbanism, Civilization, and State I.2. Harappan Society - An Overview I.3. Harappan State I.4. An ‘oecumene’ of the Harappan City-states? I.5. A Stateless Society? Section I

Social and Political Organization



Our knowledge about the social and political structure of the Harappan society is quite fragmentary and prone to an openended speculation. In such a situation, differences of opinion are quite natural, sometimes irreconcilable. Most of these speculations hinge on the theoretical model for the origin of civilization and the formation,

even the existence, of state. Common to all these models is the accumulation of 'surplus' in the agricultural economy of the land and the evolution of an elite who extracted this surplus from the village economy, controlled it through persuasion or coercion, and allocated it according to its own whims or to the commonly felt needs. Differences arise in defining the nature of "surplus", composition of the elite, methods of extraction of surplus, and the priorities in allocation and redistribution of this surplus. It is these details that determine the nature of social and political organization of a society and it is these features that distinguish one civilization from another.

There is no useful historical record to provide archaeologists with significant insights into those aspects of Harappan life and history that are difficult to elucidate from the archaeological record. We do not know what these peoples called themselves or their cities, towns, and villages. We have no king lists like those that came to our knowledge in Mesopotamia, no internal chronology, no historical sense of the provinces and districts of the civilization. There is no historical record of commerce, production, consumption, or technological skills and processes. And, what is perhaps most important, there is no historical record of the internal social organization of these peoples - their 'lineage', 'clans', 'sodalities', or 'guilds'. We have no sense of the role of the state as opposed to the religious institutions in the operation of people's life - a theme central to understanding the historical dynamics of the other ancient civilizations of Asia.

However, the lack of a true historical record does not mean that interesting and important insights into the Harappan Civilization are beyond the archaeologist's grasp. The necessary reliance on archaeological evidence has ensured that many aspects of Harappan material culture were investigated as well as or better than those of literate civilizations. Indeed, if we judge the amount of excavation, study, and writing on this important phase of Pakistan's ancient history, much of an educated guess is possible. After all, there exists a formidable record of archaeological data on the Harappan material culture (see Volume III on Harappan Material Culture), which makes it possible to fully review the life in early cities of the Indus Valley and perhaps its first state. In so doing, we may not reach any indisputable conclusion about the social and political organization of the Harappan society but we do have a large enough base for useful speculations.

In this Section we shall first discuss the various theories of social change, the emergence of complex societies, and the formation of state in the ancient cultures of the Old World. This introductory chapter is then followed by a detailed review of the social organization of the Harappan Civilization. The study of sociopolitical structurer of early civilizations is in effect the study of *complex* societies, such as the Bronze Age Mesopotamia, ancient Egypt, and the Harappan Civilization, and differentiate it from simple societies, such as the pre-urban cultures of the Indus Valley, through a few essential criteria which are moreor-less universally agreed on. For example, in a complex society *social stratification* divides people and families into distinctly ranked groups (strata) on the basis of their wealth and status. The extent of social differentiation and stratification is still a burning question in Indus archeology; we devote a full chapter on it.

As we proceed, we examine the question if the Harappan polity was indeed a centrally organized state and what was the glue that kept such a diverse geographical area culturally together. Alternatively, we need to examine if the Harappan polity was nothing but a collection of a few urban islands amidst an agro-pastoral society. Throughout this discussion, we shall look at the types of questions that can be answered by the mute archaeological record. The broader concern is, however, to ask as to how the people of the Harappan Civilization organized their social life, who were the peoples we are talking about, how did they live their daily life, and what was their ideology that bound them together. These questions have been challenging archaeologists, historians and linguists ever since the discovery of Harappa and later Mohenjo-daro in the 1920s and are still at the forefront of theoretical discussions today.

Chapter I.1

Complex Societies, Urbanism, Civilization, and State



Since much is not known about the basics of the Indus social and political structure beyond what can be indirectly deduced from a collection of material remains, it is obviously a difficult task to write a coherent story on these matters or even analyze them from a distance. The central issue here is whether Mature Harappan traits such as a high degree of urbanization, the homogenous material culture, developed craft specialities (metallurgy, lapidary work, pottery, etc.), specialized public architecture (city walls, granaries, great bath, etc.), literacy, extensive internal and external trade, and a grid-patterned urban centers, reflect a highly stratified society with some type of centralized authority, the sate. If it did, what were its characteristics and what were its methods of control. Conversely, if such a centralized authority in the form of state did not exist, then how was it possible for the Harappan to plan their cities and provide the basic civic services as is evident from the large number of wells and the provision of intricate sewage removal systems, organize their craft production, and undertake long distance trade.

In other early civilizations similar culture traits are associated with the development of social-political elites, centralization of authority (sacred and/or secular), either in the form of a territorial state or in the shape of city-states which individually underwent cyclic patterns of development. Did the Indus Civilization follow any one of these examples, or did it represent a sociocultural system that was unique to the Indus Valley?

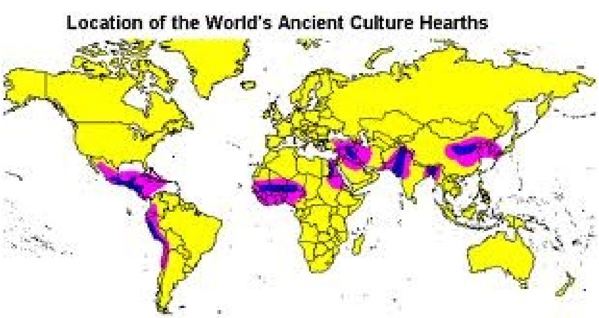
The Harappan Civilization was no doubt a complex society, an urban civilization, and probably a close-knit commonwealth of city-states, if not an outright centralized territorial state. This chapter briefly examines the theoretical aspects of these phenomena and provides a foundation for the discussion that follows in the subsequent chapters. In this introductory chapter our main interest is to pose the questions: What are complex societies? What are their defining characteristics? How do they differ from the simpler, egalitarian societies out of which they developed and to which they often revert? How are they related to the phenomenon of urbanization and ultimately to cities and state? Are complex societies a discrete type or a ‘stage’ in cultural evolution, or is there a continuum from simpler to complex? A related question is why complex societies develop and how the early state took shape. These questions have been of perennial interest in the social sciences, including archaeology and prehistory, and have been studied extensively for the past several decades with reference to Mesopotamia, China and Egypt, and more recently to the Americas and West Africa. Indus Valley,

with a few exceptions, has generally been left out of these studies. Nevertheless, these studies are useful in examining the sociopolitical situation in the Greater Indus Valley during its Mature Harappan Phase, although they may not offer us completely made-up answers.

This chapter is intended to provide some of the ideas against which the material in the next four chapters could be pursued. We are dealing here with several interconnected questions but which ultimately address the same issue: what was the working of the Indus society? The material covered here stems from a large number of comparative studies, one example of which is Bruce Tigger's *Understanding Early Civilization* to which we shall refer again and again.

Although much is now known about the evolution of social complexity and, by connotation, of civilization, there is no overall consensus about such things as why social complexity emerges, why societies become stratified or differentiated, and why the small, independent groups of early human history have given way to the large territorial states, or interdependent citystates of later millennia. This is without doubt a fascinating subject, and one that offers tempting diversions. These diversions will largely have to be resisted. It cannot, however, be wholly resisted, for the human past may not be understood except in the context of how complex societies at large function and operate, and that cannot be divorced from the question of how they have come into being. To explain the Harappan society it will be necessary to discuss, briefly, general views of how complex societies in other parts of the world and at different times have developed, and to evaluate the usefulness and relevance of these views to the problem of the Harappan sociopolitical organization. Accordingly, this question will be taken under consideration but only in a partial fashion.

Before we begin, however, we need to pay attention to the various terms, such as *civilization*, *urbanism*, *simple* and *complex societies*, *state*, and *city-state,* we frequently use in the discussions of the sociopolitical organization of early civilizations. In everyday discourse, these terms may be used loosely and interchangeably, but each tends to highlight a particular facet of a complex human organization. While there is some basis for treating the terms *civilization*, *urbanism*, *complex societies*, and *state* - and the concepts they represent - as synonymous, there are also subtle differences between them. In addition to these terms, we frequently encounter the use of some other theoretical constructs, such as *egalitarian*, *ranked*, and *class-based* societies, and the related constructs of political organization, such as *band*, *tribe*, and *chiefdom*, the meaning of which may not be readily clear to the reader. The refrain of '*social differentiation*' and '*socioeconomic stratification*' is also a familiar and ever present theme in such a discourse. We shall take our time to elucidate these concepts, some rather briefly and some in considerable details. The objective is to provide the reader with sufficient background for perusing the next three chapters



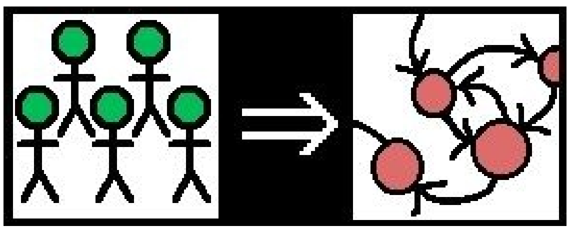
when using this term to define more precisely the phenomenon that is being described as complex. Civilization is an outcome of complex society. In this respect, we speak of both as synonymous

entities. In other words, civilization implicitly assumes the preexistence of a complexity in the society.

Complex cultures foster *specialization* and for such specialization to occur, there must be a *surplus*. Complex cultures also are generally governed by *states*, which possess sole authority to collect and distribute resources for the common good and to enforce the rules that order society. Furthermore, a formal *religion* in a complex culture provides a system of common values and concepts about the supernatural that often serves to validate and legitimize the social order. This explains why the state and religion are so often intertwined in complex cultures. It has also been recognized that a complex society is a prerequisite for the emergence of cities and state.

Early Civilizations: The word “civilization" is very common in archaeology and ancient history but its meaning is somewhat problematic, often misunder

without undue digressions.



Complex Society: In anthropology and archeology, a complex society is a social formation that is otherwise described as a

formative state. The main criteria of complexity is the extent of a division of labor in which members of society are *specialized* in particular economic activities and depend on others for goods and services within a system regulated by custom and law. The larger the population, the more complex and variegated the coexistence of people tends to become. Complex societies under this definition are also agricultural to provide the surplus required to support a social (non-food producing) elite. Explaining the origins of these types of social formations, which appear in many areas of the world, is one of the tasks of archaeology.

The term "social complexity" is, however, not without problems, and qualifiers are typically applied by anthropologists and archaeologists stood, and subject to changes with the context, even with time. For example, in eighteenthcentury France, it had a decidedly moral meaning. Civilization was contrasted with “barbarism” and referred to as "the process of being civilized" (1). By the first quarter of the nineteenth century, the sense of the word had changed dramatically. It had come to mean "the characteristics common to the collective life of a period or a group" (1). Unlike the eighteenth-century meaning, it did not necessarily connote a specific level of cultural achievement. The term could now be applied to a broader range of groups, without value judgment about appropriate moral behavior and degree of ‘civility’. Gradually, the term has come to be used to refer to the material and instrumental side of human cultures that are complex in terms of technology, science, social stratification and division of labor. Such civilizations are generally hierarchical and urbanized.

There is often a tendency to use the term in a less strict way, to mean approximately the same thing as “culture” and therefore, the term can more broadly refer to any important and clearly defined human society. Still, even when used in this sense, the word is often restricted to apply only to societies that have attained a particular level of “advancement” - especially the founding of cities. The level of

advancement of a civilization is often measured by its progress in agriculture, long-distance trade, occupational specialization, a special governing class and urbanism. Aside from these core elements, a civilization is often marked by any combination of a number of secondary elements, including a developed transportation system, writing, standardized measurement, characteristic art, and architecture, metallurgy, and political structures. Civilizations have been distinguished by their means of subsistence, types of settlement patterns, forms of government, social stratification, economic systems, and other cultural traits.

Social scientists, such as V.Godon Childe, have named a number of traits that distinguish a civilization from other kinds of society. In his effort to produce a general characterization of early civilizations, Childe defined the term with about a dozen characteristics, such as cities, fulltime specialists, surplus, monumental buildings, ruling classes, trade, etc, using these criteria in a loose or abstract rather than an operational manner. One problem with such enumerative definitions is that even small disagreements about how specific criteria are defined or interpreted affect what societies are assigned to a particular category.

Complex entities cannot usefully be defined by establishing a monothetic set of specific attributes that each of them must possess (2). For example, city is generally considered an essential element in the conceptualization of civilization. Cities, however, differed considerably in size, layout, and function in early civilizations, and scholars who used highly specific definitions of urbanism maintained that some civilizations, such as those of ancient Egypt and the Maya, lacked them; yet no anthropologist was prepared on that account to deny these two particular literate societies the status of civilization. At the same time, the highly urbanized Yoruba in West Africa have often been denied the status of a civilization or of having 'cities' rather than 'towns' because they were non-literate. Each early civilization was the result of individual historical processes that produced distinctive material and institutional expressions.

In recent years, anthropologically oriented archaeologists have evolved working definitions of civilizations based on social science literature, rather than merely on archaeological evidence. This has been done specially in light of the discovery of civilizations in South America, where "old world" definitions are contradicted. For example, while urban life and writing are two clear indicators of a civilization, this does not apply to South America where complex settlements are found with monumental architecture without these indicators, and even have different subsistence economies than in Eurasia. Hence, it has been found feasible to define early civilizations as the earliest and simplest forms of societies in which the basic principle governing social relations was not kinship but a hierarchy of social divisions that cut horizontally across societies and were unequal in power, wealth, and social prestige. In these societies a tiny ruling group that used coercive powers to augment its authority was sustained by agricultural surpluses and labor systematically appropriated from a much larger number of agricultural producers. Full-time specialists (artisans, bureaucrats, soldiers, retainers) also supported and served the ruling group and the government apparatus it controlled. Rulers cultivated a luxurious style of life that distinguished them from the ruled. This implies power and economic focus which is marked by a highly developed degree of ownership, or control of main productive resources in such a way that politicosocial hierarchies complement each other in the administrative, territorially organized units such as cities or states.

In the past, civilization was often equated with the presence of writing, on the ground that the ability to record speech made possible new forms of innovation, commerce, and understanding. Yet this

association cannot be sustained any more than any other attempt to define early civilizations in terms of specific items of material culture. In Egypt, Mesopotamia, China, and among the Maya, scripts that could be used to record speech were invented at a relatively early stage. In highland Mexico, Peru, and West Africa recording devices of this sort did not develop. Yet there is no perceptible difference in the overall degree of social, economic, and political complexity reached by early civilizations that used writing and those that did not. The jury on writing in the Indus Civilization is still out. This script has not yet been deciphered and in recent years its very existence has been challenged.

Civilization is a movement and not a condition, a voyage and not a harbor.

Arnold J. Toynbee

Economically, civilizations display more complex patterns of ownership and exchange than less organized societies. In this sense, ‘early civilization' is undeniably an evolutionary concept. It assumes the existence of less complex societies, some of which evolved into early civilizations, and more complex ones, which either developed out of early civilizations or grew up alongside and ultimately replaced them. Unilinear evolutionists in the nineteenth century and more recently neoevolutionists believed that all societies at the same stage of development were very similar. Societies could therefore be assigned to a particular stage on the basis of a small number of distinctive criteria or even a single trait.

All early civilizations have depended on agriculture for subsistence. Agricultural *surplus* has been important in the emergence of civilization as a surplus of food permits some people to do things besides producing food for a living. A surplus of food results in a division of labor and a more diverse range of human activity, a defining trait of civilizations.

Civilizations are usually very large for both geographical dimensions and the populations. It follows then that they are characteristically composed of many kinds of people. They are multiethnic. This is not generally true for smaller, less complex forms of human organization. Early civilizations tend to foster allegiance to the city or the state, and regulate the inherent divisive forces in large human groups lacking shared histories, by building what Robert Redfield has called 'Great Traditions' (4). This is a concept that has come to mean less to social scientists than it once did; but it seems that it leads us to an important point. These 'Great Traditions' are the systems of belief synthesized from the histories of their multiethnic populations. These are essential to causing the individual civilization to hold together using some dimension of cohesiveness other than brute force. In this sense, 'Great Traditions' are both identifiable and unique to the kind of complex social form we are interested in this discourse.

Studying Civilizations: The study of entities categorized as civilizations has been a part of archaeological research since its inception in the nineteenth century and has been pursued with varying degrees of effort by every subsequent generation of archaeologists. From a disciplinary perspective this preoccupation is due, in part, to the ability of archaeologists to examine the temporal and geographic sweep of civilizations over the last 5,000 years, an interest also shared with historians. Describing and explaining the largescale patterns associated with complex societies has thus remained central to archaeological investigations, despite sharp differences in theoretical outlook. Academic concern with the identification and study of ancient civilizations has also been fueled by public fascination with the monuments and treasures the ancient peoples left behind; more

subtly, by the role they play in the ongoing discourse over the relationship of Western nations to the societies they have historically dominated; and increasingly by the role which manipulation of the past has come to play in the legitimizing strategies of current political thought such as the legitimization of the exploitation of the masses by wealthy elites - the system we call capitalism.

One method for studying ancient civilizations is by way of comparison. Comparison has been employed in almost all cases, ranging from straightforward applications of the comparative method to identify common processes or historical connections, to its implicit use in framing contrasts and commonalities among ancient and contemporary cultures. Here archaeology plays a decisive role. Anthropologists also study comparative societies by participating in archaeological research. So, what is learnt from one, or better still, several, helps us to understand others. If we can get a fairly full picture of what any ancient society was like and what went on there, from that we can learn the same sorts of things about social organization and human motivation of another society. Another way is to study primitive societies of the present time and extrapolate the data so collected to the ancient societies. Here anthropology plays a useful part. Furthermore, there is the role of ancient societies in chains of cause and effect. Science consists of establishing chains of cause and effect, that is, of specifying mechanism (5).

Several theories and models have been offered in this regard, each emphasizing certain characteristics of civilization in question. It is not the place here to review these models and the theoretical underpinnings that support these models. It can, however, be said that archaeologists recognize a complex society, such as that of the Bronze Age Mesopotamia, ancient Egypt, and the Harappan Civilization, and differentiate it from a “simple” society, such as the pre-urban cultures of the Indus Valley, through a few essential criteria. For example, in a complex society *social stratification* divides people and families into distinct ranked groups (strata) on the basis of their wealth and status. Complex cultures also feature *specialization* and for such specialization to occur, there must be a *surplus.* Complex cultures also are generally governed by *states*, which possess sole authority to collect and distribute resources for the common good of the elite and to enforce the rules that order society. Furthermore, a formal *religion* in a complex culture provides a system of common values and concepts about the supernatural that often serves to validate and legitimize the social order. This explains why the state and religion are so often intertwined in complex cultures. It has also been recognized that a complex society is a prerequisite for the emergence of cities and state.

There is a vast amount of literature on early civilizations, mostly pertaining to individual entities but some also dealing with these civilizations on comparative basis. For instance, Bruce Trigger (2) has surveyed the common features that anthropologists have attributed to early civilizations in recent decades and determined how these general features differed from those associated with more and less complex societies. We have extensively made use of this study in the preparation of this chapter and frequent references to it will be made.

Social Evolution and Emergence of Civilization: How did civilization emerge and why? These concerns are, perhaps, most salient in the work of nineteenth-century cultural evolutionists who attempted to order growing bodies of ethnographic and archaeological information by categorizing and arranging cultures in a developmental sequence. Civilization was regarded as the final step in a linear process propelled largely by the law of progress, which in its crudest form was defined in Darwinian terms. Only the fittest survived, and the fit were by definition the wealthiest, most powerful, and most "civilized" segments of the world's population. Classical evolutionary theory thus

provided a scientific underpinning for the grand narrative of the historical development and expansion of western states. It is this imperialist and capitalist drivenunderstanding that still permeates popular thought and makes the very term "civilization" somewhat suspect among contemporary scholars.

The evolutionists sought to track the development of culture through time. Just as species were thought to evolve into increasing complexity, so too were cultures thought to progress from a simple to complex societies and states. It was thought that most societies pass through the same series of stages to arrive, ultimately, at a common end. Change was thought to originate from within the culture, so development was thought to be internally determined.

The evolutionary progression of societies had been accepted by many since the Enlightenment. Among these was Montesquieu, who proposed an evolutionary scheme consisting of three stages: hunting or *savagery*, herding or *barbarism*, and *civilization*. This division became very popular among the 19th century social theorists, with figures such as Tylor and Morgan in adopting this scheme. Tylor believed that there was a kind of psychic unity among all peoples that explained parallel evolutionary sequences in different cultural traditions. In other words, because of the basic similarities in the mental framework of all peoples, different societies often find the same solutions to the same problems independently. But, Tylor also noted that cultural traits may spread from one society to another by simple diffusion - the borrowing by one culture of a trait belonging to another as the result of contact between the two. In his best-known work, *Ancient Society*, Morgan divided the evolution of human culture into the same three basic stages Tylor had suggested (savagery, barbarism, and civilization). But he also subdivided savagery and barbarism into upper, middle, and lower segments, providing contemporary examples of each of these three stages. Each stage was distinguished by a technological development and had a correlate in patterns of subsistence, marriage, family, and political organization. In *Ancient Society*, Morgan commented:

"As it is undeniable that portions of the human family have existed in a state of savagery, other portions in a state of barbarism, and still others in a state of civilization, it seems equally so that these three distinct conditions are connected with each other in a natural as well as necessary sequence of progress" (6).

It is important to note that all early evolutionary schemes were unilineal. Unilineal evolution refers to the idea that there is a set sequence of stages that all societies will pass through at some point, although the rate of progress through these stages will vary. Groups, both past and present that are at the same level or stage of development were considered nearly identical. Thus a contemporary "primitive" group could be taken as a representative of an earlier stage of development of more “advanced” types. The evolutionist program has been summed up by Tylor, who notes:

"The condition of culture among the various societies of mankind is a subject apt for the study of laws of human thought and action. On the one hand, the uniformity which so largely pervades civilization may be ascribed, in great measure, to the uniform action of uniform causes; while on the other hand its various grades may be regarded as stages of development or evolution, each the outcome of previous history” (7).

Sir James Frazer focused on the evolution of religion and viewed the progress of society or culture from the viewpoint of the evolution of psychological or mental systems. Among the other evolutionary theorists who put forth schemes of development of society, including different

religious, kinship, and legal institutions, were Maine, McLellan, and Bachofen.

The evolutionism of Tylor, Morgan, and others of the nineteenth century is largely rejected today because their theories cannot satisfactorily account for cultural variation - why, for instance, some societies today are in "upper savagery" and others in "civilization." The "psychic unity of mankind" or "germs of thought" that were postulated to account for parallel evolution cannot account for cultural differences. Another weakness in the early evolutionists' theories is that they cannot explain why some societies have regressed or even become extinct. Also, although some societies may have progressed to "civilization," some of them have not passed through all the stages. Finally, one of the most common criticisms leveled at the nineteenth century evolutionists is that they were highly ethnocentric - they assumed that Victorian England, or its equivalent, represented the highest level of development for mankind

The demise of nineteenth-century evolutionary theory in academic discourse, reshaped, but did not eliminate archaeological interest in civilizations or in the use of comparison to better understand these phenomena. The theory of social evolution still finds favor among a large number of archaeologists and anthropologists but the categories of cultural stages have changed: instead of talking about savagery, barbarianism, and civilization, we generally talk about “simple” and “complex” societies or about “pre-urban” or “urban societies”. Most often, we are in the habit of replacing the savagery, barbarianism, and civilization with categories like band, tribe, autonomous village, chiefdom, and state level societies.

Apart from the process and stages of social evolution outlined above, the simple fact remains that economically stratified and socially differentiated societies developed all over the world from societies that were little stratified and relatively undifferentiated; large and densely populated cities developed from small habitation sites and villages; social classes developed from societies that were structured by kin-relations which functioned as frameworks for production, and so forth. These changes must be explained, and the social evolutionary theories, in one garb or another, are still playing their role in such discussions.

Gordon Childe's work most clearly carried these concerns into the twentieth century. His ability to synthesize enormous amounts of data was facilitated by an evolutionary perspective that drew more from Marx and Engels than from Darwin or Tylor. Childe (8) rejected biological determinism and instead attributed progress to the accumulation of knowledge which leads to greater technical control over nature and the expansion of both human possibilities and populations. Explicitly countering the nationalism of his time, he argued that all people benefit from knowledge developed over the ages as a result of diffusion - both geographic and across generations. Unlike the evolutionists of the previous century or the neo-evolutionists who succeeded them, Childe viewed societies as permeable and susceptible to external stimuli, or, phrased more broadly, open to historical forces generated by interaction with other groups. He also argued that while the comparison of civilizations - such as Egypt and Sumer
- could point to common processes and results, most details of economic as well as religious and political systems varied tremendously; thus the histories of individual civilizations could not be subsumed by a single narrative of social change.

Childe (9) equated the emergence of civilization with the development of urbanism and a series of concomitants such as writing, monumental architecture, and specialized craft production. He believed

that progress, or the accumulation of practical knowledge, accelerated with the initial emergence of civilization; periods of arrested cultural growth he attributed not to racial deficiencies, but to internal and external contradictions generated by the urban revolution itself. Of particular importance in this regard was that neither the producers - who had been reduced to lower status - nor the elites who relied heavily on religion and superstition for legitimation - were motivated to pursue practical inventions that would lead to further growth.

While Gordon Childe's synthetic descriptive works of Near Eastern and European prehistory have long been overtaken, his interpretation of social evolutionism remains of interest. His idea of social evolution was not dogmatically unilinear. It involved branching differentiation and diffusion and an acknowledged role for what he called 'the Darwinian formula of “variation, heredity, adaptation and selection" in the understanding of cultural change. Moreover, unlike many later archaeological neo-evolutionists, he regarded the social evolutionary schemes of comparative anthropology as broad guiding frameworks whose implications were to be tested by archaeology, rather than providing a series of stages into which the archaeological material was to be slotted. Gordon Childe have had a tremendous influence in the study of civilizations, we shall come back to him again.

Some recent anthropologists, such as Robert Carneiro (10) view the social evolution in terms of *cultural cumulation. Cumulation* is simply the addition of the new along with the retention of the old. This, of course, is one of the major features of evolution; that is, it consists of building larger and more complex structures by taking the elemental pieces of it, building them up, and aggregating them. Evolution can then be seen as consisting largely of this cumulation of things. And that is true of political evolution as well as evolution of other aspects of culture.

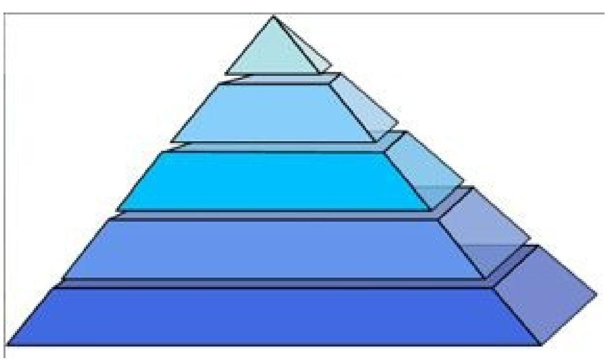
As knowledge of the past has increased, many concepts formerly associated with evolutionary theory have been recognized as erroneous and abandoned. Evolutionary specialists no longer claim that a specific trajectory is inherent in sociocultural evolution and shapes human behavior independently of human will. Such views are now summarily dismissed as 'God-surrogates' intended to preserve a belief that human history was the unfolding of some predetermined plan at a time when faith in divine providence was yielding to a more secular outlook. Today it is recognized that change is neither more nor less normal than stasis, that most innovation tends to promote random or multilinear rather than orthogenetic cultural change, that cultural change occurs for many different reasons and in highly contingent ways, and that, because of this, it is not predictable in specific instances. It is also recognized that greater social complexity is not necessarily accompanied by an increase in human happiness and that the concept of progress is a purely subjective one that has no place in scientific discourse (2).

In his hard-hitting book, *Myths of the Archaic State* (7), Norman Yoffee contests a variety of “myths” of the social evolution and nature of the earliest cultural stages, including the "archaic states," as some have curiously called them.These include:
(a) the earliest states were basically all the same kind of thing (whereas bands, tribes, and chiefdoms all varied within their types considerably); (b) ancient states were totalitarian regimes, ruled by despots who monopolized the flow of goods, services, and information and imposed law and order on their powerless citizens;
(c) the earliest states enclosed large regions and were territorially integrated;
(d) typologies should and can be devised in order to measure societies in a ladder of progressiveness;
(e) prehistoric representatives of these social types can be correlated, by analogy, with modern

societies reported by ethnographers; and
(f) structural changes in political and economic systems were the engines for, and are hence necessary and sufficient conditions that explain, the evolution of the earliest states.

“If myth can be defined [in at least one respect] as "a thing spoken of as though existing," we find that much of what has been said of the earliest states, both in the professorial literature as well as in popular writings, is not only factually wrong but also is implausible in the logic of social evolutionary theory.... Much of the literature on the evolution of ancient states focuses nearly exclusively on political systems and has tended to reduce the earliest states to a series of myths about godly and heroic leaders who planned and built prodigious monuments and cities, conquering their neighbors and making them powerless subjects of the ruling elites. Little has been written about the roles of slaves and soldiers, priests and priestesses, peasants and prostitutes, merchants and craftsmen, who are characteristic actors in the earliest states”, writes Norman Yoffee (7) in his polemic fervor.

In spite of this criticism, a strong tendency has been noted for sociocultural change to move in the general direction of greater complexity. It has been demonstrated archaeologically that all modern societies are descended from Upper Paleolithic hunter-gatherer bands and these in turn from still earlier scavenging societies. Along the way, societies that abandoned hunter-gatherer economies experienced major changes in social organization and understandings of the universe and the place of humans in it. This results from the greater capacity of more complex societies to compete successfully with less complex ones for control of territory and other resources. As a result of such competition, in all but the poorest and most marginal environments (and increasingly even in these) smaller-scale societies must either acquire the key attributes of more complex societies or be displaced or absorbed by them. Convergence of this sort occurs far more readily in human societies than among other animal species because of the unique degree to which human behavior is learned.



Egalitarian, Ranked, and Class-based Societies: Anthropologists tend to classify ancient societies according to the degree to which different groups within a society have

unequal access to advantages such as resources, prestige or power. Virtually all societies have developed some degree of inequality among their people through the process of social differentiation and stratification - the division of members of a society into strata (or levels) with unequal wealth, prestige or power. Differences lie in how societies treat the inequalities. Some may downplay them so they become transparent and insignificant (egalitarian societies) while others will accent inequalities (class-based societies). Three different types of societies can generally be recognized: egalitarian societies, ranked societies and class-based societies.

Egalitarian societal members tend to treat each other as equals. Wealth differences are few as is the

amount of power available to any individual or group. The people possess norms that emphasize sharing and ideals of interpersonal equality. This is not to say that stratification is nonexistent in these societies. In comparison with non-egalitarian societies, however, stratification is relatively insignificant. Even an otherwise respected member of the group is a member of society as an equal who has a defined role that carries prestige but not wealth, power, and status. Hunter-Gatherer bands fall in this category.

In ranked societies people are divided into hierarchically ordered groups that differ in terms of prestige, but not significantly in terms of access to resources or power. Within this context it is possible to identify persons we can be labeled as chiefs and whose inherited position and prestige is often linked to the redistribution of goods. Ranked societies are a complex arrangement but still not as complex as the class-based societies.

In class-based societies people are divided into hierarchically ordered groups that differ in terms of access not only to prestige, but also to resources and power. Western capitalist societies have distinct classes (e.g. upper class, middle class, poor), but mobility amongst the classes sometimes occurs through activities such as education, marriage or hard work. In some societies, such as that in India generally, class structure is based on birth, the individual is assigned his place in a “class” (the caste) on birth within which he can move up or down but denied the crossing of the class structure. Urbanization calls for a class-based society and it is generally thought as the basis of an urban civilization. In context with our discussion of civilization, we are dealing with this type of society.

In early civilizations and other complex preindustrial societies inequality was regarded as a normal condition, a personal misfortune or individual's fate, rather than as a social evil. Structures based on differential power were pervasive. Every child was born into a family that was internally hierarchized in the image of the society at large. Young people were expected to obey older people, especially older men. 'Father', 'king', and 'god' were often synonyms and metaphors for power.

While most small farming communities were already hierarchized, they became even more so with the development of more complex urban societies. The most powerful and advantaged members of these communities strengthened their positions by appropriating the means of production and acting as intermediaries between their fellow villagers and the state. The general pervasiveness of inequality ensured that its legitimacy went unquestioned. If egalitarian social organization was known to people in early civilizations, it was as a feature of small-scale and usually despised societies beyond the pale.

In all early civilizations richer and more powerful people cultivated a distinctive lifestyle no earlier society is known to display. A small group of people controlled the major public institutions and used this control to protect and enhance their wealth and power. They also tended to marry people of similar status and to restrict and control vertical social mobility. Kings and nobles, not a mass of sovereign citizens, stood at the head of society, and there were marked differences in way of life between the wealthy, powerful, and leisured minority that controlled society and the much poorer, hardworking, and ideally obedient mass of the population. In this respect the modern civilization mirrors the general ethos of early civilizations.

In early civilizations there was a need not only to protect the reality of power and authority from challenge and ridicule by the lower classes but also to ensure that the symbols of status were not encroached on by those of lower rank. Protecting the privileges and symbols of authority was one of the responsibilities of the monarch or the state generally. In some early civilizations, sumptuary laws

dictated what kinds of clothes, jewelry, and insignia could be worn by different classes. Among the Aztec particular colors and patterns of cloth were restricted to specific classes and ranks within classes. Every enemy soldier captured by an Aztec warrior entitled that warrior to wear a distinctive costume, ornaments, and hairstyle and to perform special honorific roles in public rituals.

The Inca government carefully regulated the kind and amount of goods that members of different classes could own. Inca officials distributed fancy clothes, women, male servants, metal ware, land, and public offices as rewards for service to the state. These gifts were carefully graduated to take account of the recipient's social rank. Rulers obliged individuals to wear their hair and dress in a manner that was distinctive of their ethnic group. This not only distinguished the ruling class from subject peoples but, when various ethnic groups were resettled in different parts of the kingdom, also distinguished such settlers from indigenous people.The Benin rulers claimed ownership of all the red coral beads in their kingdom. These beads were highly coveted royal honors. Kings assigned collars made of them to officials for their lifetimes, to be returned when the recipients died. The collars were also periodically recalled to the palace, where a slave was ritually sacrificed and his blood poured over them to renew their power (2).

While all early civilizations shared a general view of class hierarchy, the criteria and clarity with which these broad classes were distinguished varied and there were significant differences among early civilizations in the extent to which distinctions between classes were formally demarcated. There is need, therefore, to consider how class was perceived and represented in early civilizations and to what extent differences in class and status were symbolically accentuated or disguised by lifestyles. This is especially important in the case of the Indus Civilization where socially differentiated classes did exist but only marginal evidence for a dominant class, as deduced from archaeological remains, is at hand.

In most of the early civilizations heredity played a significant role in determining one’s class but there were some civilizations wherein heredity did not play such a deciding role. For example, the early Mesopotamians do not appear to have had a hereditary nobility, but their free population was divided into two groups with unequal political power and unequal rights before the law. The higher-ranking of the two thus constituted a formally recognized upper class. The closest thing to a dominant class in Yoruba (West Africa) society was the entire body of male household heads. Yet, in addition to the royal clans, some Yoruba patrilineages were larger and more prosperous than others, and the most prominent male members of these lineages shared substantial power with the king. While these men and their families may not have constituted a formally recognized upper class, they formed a *de facto* one (2).

Class systems in early civilizations were characterized by limited vertical mobility. Class membership was determined mainly by birth and, while vertical mobility did occur (especially in societies that were expanding politically or economically), promotion in the social hierarchy was decided in the final instance not by personal achievement but by royal or upper-class recognition, the criteria for which varied from one early civilization to another.

Wealth as a Symbol of Status and Power: A differentiated and stratified society asserts that there must be a powerful elite, and there must be a mass of dependents who feed the elite and keep them in power (12). This strange and exploitative system must also be legitimized. One category of such vehicles is represented by symbols of wealth and power, the other is manifest in symbols that

somehow relate to the supernatural. Wealth plays a specially critical role in this process. It is of course an integral part of all civilizations, and its deployment is a clear indication of the high degree of social stratification that characterizes such societies. Under such circumstances the amassment of wealth cannot be understood merely as an end in itself, but also as a means of expressing and maintaining an uneven order.

John Baines and Norman Yoffee were the first who examined the issue of civic order and legitimacy through the use of wealth and symbols in ancient societies, taking Egypt and Mesopotamia as example (11). Other researchers later examined the issue in several other civilizations (12), among whom is Jonathan Mark Kenoyer, who studied this subject in context with the Harappan Civilization (52). While the wealth and its manifestations, has been one of the most important elements in the dominance of the elite over the productive masses, it is not all-pervasive in all early civilizations.The unreliability of directly equating material wealth with status is increasingly coming into focus and recently much discussed in the archaeological literature (20,21,36). This may especially apply to the Harappan society where the relationship of wealth to processes of social and political power does not emerge as clearly as in other contemporary civilizations and where an expression of unequal access to labor and to key resources may have basis other than wealth.

Kenoyer evidences the existence of an all pervasive elite class whose power and legitimacy and hold on power arose on the manifestation of wealth and manipulation of widely accepted material symbols, but there are other scholars who minimize, even deny, the existence of such a strong ruling class and their use of wealth as a means of acquiring power and maintaining the civic order in the Harappan society. They stress the role of religion and the prevailing “ideology” as the glue that held the Harappan Civilization together.

Bands, Tribes, Chiefdoms, and State: Egalitarian, ranked, and class-based societies have taken different political shapes, depending on their social complexity. We are taught in our colleges and universities that pre-state societies are small-scale, simple societies, based on kinbased communities. They vary greatly in their degree of political integration and can be divided into three progressively complicated broad categories: *bands*, *tribes*, and *chiefdoms*.

Bands are thought to be autonomous and self-sufficient groups that usually consist of only a few families. They are egalitarian, with leadership coming from the experience and personal qualities of particular individuals rather than from political power. Their economic base is merely a subsistence on hunting and gathering. Tribes are also egalitarian, like bands, but with a greater level of social and cultural complexity. They have developed kin-based mechanisms to accommodate more sedentary living, to redistribute food, and to organize some communal services. Tribal societies generally subsist on agriculture and pastoralism. Chiefdoms are societies headed by individuals with unusual ritual, political, or entrepreneurial skills and are often hard to distinguish from tribes. Society is still kin-based but more hierarchical, with control concentrated in the hands of powerful kin leaders responsible for the redistribution of food and other resources. Chiefdoms tend to have high population densities and display the first signs of social ranking, reflected in more elaborate material possessions. Inevitably this loosely defined taxonomy of human societies led to assumptions that chiefdoms, the most elaborate pre-state societies, are the precursors of states.

Closely related to the increasing complexity of bands, tribes, and chiefdoms, is the emergence of state, which some scholars have alleged to be the last stage of social and political development. It is

often considered a hallmark of a civilization.

The conceptualization of the emergence of state-level society in terms of tribe, chiefdom and state is rather simple and logical for the general understanding of the cultural history of mankind. However, it has generally troubled those who have tried to apply it on concrete cases. In our case, for example, we are at loss when we try to apply this typology and its associated evolutionary implications to the Early, Mature, and even

Many analysts are prisoners of ideal types. In their view, there are 'chiefdoms' and there are 'states' - and never the twain shall meet: however much variation exists within these categories.

Yale H.Ferguson,"Chiefdoms to City-States"

to post-Indus periods. Were the Early Indus cultures organized as tribes? Or, were they a collection of chiefdoms? And, was the Harappan society a confederation of chiefdoms or a true state or even an empire? Here we have difficulty in the application of the concept of not only chiefdom but also that of the 'tribe' as an organizational unit of the Harappan or the Early Indus society. A typical chiefdom, such as the various Vedic chiefdoms of Punjab in the post-Harappan times, is not difficult to identify as such. But what about societies that find themselves at the upper boundary of the category? How do we distinguish a chiefdom from a state? Furthermore, at the lower boundary, how do we distinguish a chiefdom from whatever it is that immediately precedes it?

To get around these conceptual ambiguities, several modifications to the central hypothesis have been proposed. For instance, the stage of 'tribe' has been replaced with that of 'autonomous villages'. According to this conceptualization, there are at least two major pathways to complex societies rather than one: band, autonomous village, chiefdom, and state, as well as the more commonly accepted band, tribe, chiefdom, and state.

In context with the Indus Valley, this altered sequence may turn out to be not only an *alternative* path to civilization but the *principal* one. We find the signature of, and there is plenty of archaeological evidence for it, economically and politically autonomous villages but also of a supra-village organization among the Baluchi and Sindhi communities of the Harappan period and among almost all the known settlement area of the entire Indus Valley in the Early Harappan times. The development of vast regional cultures in the Early Indus period (Kot Diji, Amri, Quetta Ware, Kulli, etc) was not possible without the existence of such autonomous villages and such a supra-village organization. The proliferation of settled agricultural villages over a large area of more-or-less homogenous cultures not only in Baluchistan and Sindh but also in Cholistan, indicates a social and economic organization that surpasses any kin-based arrangements, such as clans and tribes, although these kin-based units could have existed as constituent components of this village and supra-village organizational system.

Autonomous village and supra-village organizations are a prominent element in the Carneiro's theory of the origins of state. In this scenario, most of the early agricultural communities were organized as autonomous villages. If these autonomous villages were circumscribed geographically (such as the small villages along a river, flanked by vast deserts, typified by the Indus Valley as well the Nile and Euphrates plains), one village will subdue the other villages and form a multi-village chiefdom. These petty chiefdoms will then aggregate into larger chiefdoms, and eventually into state, again through coercion and war. In this process, however, the villages remained functionally

autonomous, no doubt with multiple layers of exploiting authorities. We shall return to the formation of state a little while later.

The reader must have noticed that anthropologists who have studied the evolution of human organization have often found it convenient to develop typologies of simpler societies. The distinction between state and non-state is one example of such a classification, and is probably the one with which most anthropologists would feel comfortable. Some scholars have further divided states into subcategories of this class as others have subdivided non-state societies into levels of complexity. According to them, a consideration of these evolutionary typologies is pertinent to understanding state formation, indeed even to defining its collapse (13).

The details of typologies are not pertinent to the present discussion, but the philosophy and assumptions underlying them are. One of the basic assumptions of the typological approach is that as societies increase in complexity, they do so by leaps from one structurally stable level to another (14). Thus, what are called 'chiefdoms' are thought to have arisen out of 'tribes,' which in turn developed from 'bands' (15). In another formulation, egalitarian societies are succeeded by ones that are ranked, then ones that are stratified, and finally by the state (16). The alternative view, which to some degree vitiates a typological approach, is that as societies increase in complexity they do so on a *continuous* scale, so that discrete, stable 'levels' will be difficult to define, and indeed may not exist.

The typological distinction of most interest here is that which exists between states and all other kinds of societies. This, as noted, is a classificatory distinction that most anthropologists seem to accept readily, and is often called the 'Great Divide' of history (17). With the emergence of states human organization began an entirely different career. The features that set states apart have already been discussed: territorial organization, differentiation by class and occupation rather than by kinship, monopoly of force, authority to mobilize resources and personnel, and legal jurisdiction. Upon closer examination, though, it does not appear that there is always the discontinuity claimed between state and non-state societies for many of these characteristics.

Cities and Urbanism: Another term that appears repeatedly in the discussions on early civilizations is "city” and “urbanism”. Cities of the past, like those in the present, were centers of population, but they never reached the scale of today's major cities such as New York or Paris. At its peak, classical Rome had a population of a million people, but in the Middle Ages the city's population declined to 100,000. In France, medieval walled cities had only 2,000 or 3,000 residents. In the Indus Civilization, the population of anyone city probably never rose above 50,000.

Urban centers were features of all early civilizations, notwithstanding the purported examples from Egypt and Inca. Contrary to a once fashionable belief, there is no evidence of a 'civilization without cities' (18), and this includes early civilizations in which, instead of cities, there were supposed to be 'ceremonial centers' inhabited only by a few priests, where people from the surrounding countryside assembled periodically for religious observance (19). Nevertheless, the nature of their cities varied considerably.

The cities and city-based political organizations are to be discussed in detail in Chapter I.4. Briefly speaking, cities act as centers of control, seats of authority and are, characteristically, the arena within which the intensity of urban life and processes are acted out. Display of social structure and hierarchy, state aggrandizement and the like are most clearly revealed within this highly charged context.The most important quality defining a city is its complexity and form of integration. Cities are made up

not simply of large populations but of large diverse populations that account for the economic and organizational diversity and interdependence that distinguishes a city from simpler settlement forms.

Archaeologists and social historians measure these factors in several ways. The presence of monumental architecture is easily discoverable evidence for organizational mechanisms that control large groups of people. It is also an indication of the probable participation of craftsmen. Manufactured goods suggest craft specialization, and an uneven distribution of such goods implies a wealthy elite. To support the craftsmen and the elite - both of whom probably do not grow their own food - the agricultural base must be efficient so that farmers can produce more than they need, and there must be mechanisms for collecting and redistributing these surpluses.

“There's no such thing as civilization. The word just means the art of living in cities.” *Roger Zelazny in The Great Book of Amber*

A related term is “urbanization” or “urbanism”. This concept refers to cities and the surrounding villages and towns that form a sustaining network for the whole society. Although the terms city and urbanism can be used somewhat interchangeably, it should be remembered that there is a distinction between the two. Urbanism implies the characteristics that distinguish cities from simpler community forms; it also refers to the organization of an entire urban society, which includes not only cities, but also towns and villages surrounding the city. A city, on the other hand, is the physical center manifesting many important characteristics of the urban condition.

Major temples, palaces, and markets tended to be located in the centers of cities. Population was usually denser in the core than towards the outer limits, and the homes of prominent people tended to be concentrated there. Servants and retainers lived close to the people for whom they worked, which made the division of cities into different areas inhabited by rich and poor less clear than it is in modern industrial cities. All cities faced problems of provisioning and waste disposal that they managed with varying degrees of rigor and success. In Egyptian and Mesopotamian cities, water was drawn from rivers, canals, wells, and cisterns and transported to homes that lacked their own wells either by hand or by donkey.

The Aztec capital of Tenochtitlan, located in the middle of a shallow saline lake, was supplied with fresh water by aqueducts that ran along the causeways linking the city to the mainland. In the Maya lowlands, where the porous limestone bedrock often left little surface water available during the dry season, many Classic Maya communities were forced to collect rain water and store it in underground cisterns *(chultuns)* and large open reservoirs. Many reservoirs in the center of cities were established in abandoned quarries from which building material had been extracted.The large buildings and plastered plazas that the Maya constructed in urban centers were designed to collect rainwater and channel it into these reservoirs. In the Indus cities, the provision of fresh water was diverse. In Mohenjo-daro, people depended on a large number of wells, In Harappa water was obtained from wells as well as from the nearby river, and in Lothal and other Gujarati towns the main source of water was probably rainwater which they collected in carefully constructed reservoirs, and so forth.

In cities of early civilizations, the dead were sometimes buried within communities. The Yoruba interred family members inside house compounds and the Maya in house platforms. In Mesopotamia major cemeteries sometimes were located in the central precincts of cities, but the dead were also buried in vaults beneath their houses. The Egyptians, Inca, and Shang Chinese normally interred their

dead in cemeteries located outside their settlements. In the Harappan cities, the dead were interned in separate locations, which we now call cemeteries. There are, however, no signs for veneration of their dead, as is the case in Egypt and many other early civilizations.

Childe's Checklist: Archaeology, as it was practiced toward the end of the twentieth century and is largely still practiced today, is social archaeology, attempting to reconstruct from artifactual evidence the configuration of a previous society in order to discover how it functioned. The lead in this was given by Vere Gordon Childe (1892–1957), the greatest archaeological theorist of the first half of the twentieth century. He was the author of many major publications, professional and popular, and the Director of the Institute of Archaeology at the University of London, when in 1950 he published a seminal article entitled '*The Urban Revolution*' (9). It set out criteria identifying the advent of complex, state-ordered societies across the Old World. Consciously or not, all contemporary archaeologists use his interpretive criteria in some form. So much is this the case that his concepts have become the 'natural' and 'obvious' ways to think about early civilizations. And it was Childe, after all, who most cogently pointed out that it is not the real world to which human beings adapt, but what they *imagine* the world to be like (22).

Childe set out to outline certain essential criteria that define a complex, urban, stateordered society. His Checklist for the Urban Revolution (9):

1. Cities that are 'more extensive and more densely settled than any previous settlements'.

2. Full-time specialists - craftsmen, transport workers, merchants, officials and priests - who 'did not secure their share directly by exchanging their products or services for grains or fish with individual peasants', but instead worked for organizations that could command surplus from peasants.

3. Concentration of surplus (limited by low productivity) as tithe or tax to an imaginary deity or divine king.

4. Truly monumental public buildings, which not only distinguish each known city from any village but also symbolize the concentration of the social surplus.

5. The presence of a ruling class, including 'priests, civil and military leaders and officials [who] absorb a major share of the concentrated surplus.

6. Members of this class develop technical expertise, particularly systems of writing and numerical notation, from which emerge exact and predictive sciences - arithmetic, geometry and astronomy. Calendrical and mathematical sciences are common features of the earliest civilizations and they too are corollaries of the archaeologists' criterion separating the historic from the prehistoric.

7. Specialists in representative art emerge full-time sculptors, painters, or seal engravers [who] model or draw likenesses of persons or things, but no longer with the naive naturalism of the hunter, but according to conceptualized and sophisticated styles which differ in each urban center.

8. Regular foreign trade, involving comparatively large volumes and long distances, emerges to exchange part of the concentrated social surplus for 'industrial materials'. To this extent the first cities were dependent for vital raw materials on long distance trade as no Neolithic village ever was.

9. Peasants, craftsmen and rulers form a community. In fact, the earliest cities illustrate a first

approximation to an organic solidarity based upon functional complementarity and interdependence between all its members such as that subsists between the constituent cells of an organism. Of course this was only a very distant approximation.'

10. State organization is dominant and permanent.

Childe's scheme has recently been criticized, sometimes severely (23) and this need not be fully repeated here. Suffice it to say that the list is an uneven adumbration of features of complex social forms in the sense that not all the 'criteria' seem equally weighted. On the other hand, Childe's statement was a beginning, as typologies usually are, at more explicitly laying out some parameters of complex societies.

Robert Adams is another strong voice in these matters. He has used Childe's typology as a beginning for some of his work. By demolishing the typology and shifting some of the terminology he has generated what he refers to as the 'core trends' of urbanization. These are: social stratification, political differentiation (state formation), craft and career specialization, urbanism and militarism. The key ingredients of this mix is that they are much more crisply set forth than previous attempts, Childe's included, and Adams treats them not as a typology but as an interrelated set of variables in a systemic context. He thus focuses on urbanization, or the process of civilization, as a holistic phenomenon. His core trends are useful tools by which to chart culture change.

The State: A state is an organized political community, living under a "government". The head of the "government" could be a priest, a king, a warlord, or anyone else who has the power to collect the 'surplus' and impose order. The 'government' could simply be a city council or any other arrangement that can make rules and assure their implementation; collect the surplus and redistribute it; and mobilize labor whenever such a need arises.

Territorially, there have been states as large as ancient Egypt (or, if the Indus Civilization was indeed a state, then as large as the Indus Valley) or as small as the city-states of Mesopotamia. State and civilization are not synonymous, as some ancient civilizations are known to flourish without state.

In order to undertake all this, the government must be legitimately constituted. The legitimacy of early states arises mainly from the ability of the rulers and the ruling class to enforce their decisions. In turn, this power ensues from their monopoly over the legitimate use of force, and from economic privileges, e.g., to pre-empt hitherto communal resources such as temple estates for the benefits of the elite. Common, society-wide ideology and religion have also been used to serve in part to validate the political organization of society.

Early states are class societies in that rulers and ruled are distinguished in their access to basic resources, in their contribution to labor, and in their rights in the social product, if not in their personal property in land, irrigation works, or animal flocks. In this sense, the state is a formal, and impersonal means of social control, as opposed to other systems where roles are determined by the personal qualities of the members of society and where offices are not present. The same is true for roles in other aspects of the urbanized society. For example, in religion, the various roles are differentiated not only laterally, in terms of the tasks to be done, but vertically.

The state machinery may be considered an overarching mechanism which regulates the relations between the constituent specialized subsystems of a complex culture. Elaborate public buildings, which serve as temples, administrative centers, and dwellings for the elite are hallmarks of states. Writing, or some equivalent form of record keeping, has also been considered an essential element of dealing with the complexity of state but there are examples where state structure existed without the presence of writing. The place of writing in an understanding of state and civilization has diminished over the years. It is not considered one of the criteria for a civilization or a state. This is due to a realization that it is in no way an independent variable. In other words, writing originated in situations

where it was called for. Kinship communities may continue to have joint tenure in basic resources, individuals may continue to identify with their clan or lineage, but the political structure is no longer reducible to the kinship structure. Political institutions and offices are imposed from above, and irrespective of descent group structure, the jurisdiction of political office is delimited in terms of territory and not in terms of lineage boundaries. When it comes to economic resources or political matters, a ruler does not act as a member of his own (royal) lineage, but his terms of reference extend over his entire kingdom. Rulers may still function as managers of ancestral cults in their capacity as closest descendants of the nation's apical ancestor, but we can see that the rulers of early states are distinct from the rulers of chiefdoms. A non-kinbased relationship between rulers and those who are ruled marks a state as major departure from other forms of societies.

In summary, state-organized societies share a number of common features:

• There is a centralized political structure and a central bureaucracy that runs the affairs of the society. Kin-based relationships are less important and specialization in economic and sociopolitical organization essentially replaces earlier forms of kin-organization.The emergence of non-kin-based relationship is a primary element of a stare.

• There is a rigid social stratification that concentrates power in the hands of a privileged elite at the head of the social pyramid. Other classes include artisans, priests, farmers, and other specialist

• States are supported by intensified food production capable of supporting large numbers of nonfood producers. Such intensification took many forms, but often involved state-organized water control and distribution system.

Like the classification of pre-urban societies, various writers have also felt the need to create classifications of early states. Webb, for example, uses the term *conditional state* to describe complex, fairly durable chiefdoms that are like states, but never achieve a true monopoly of force. Conditional states appear superficially to be similar to states, but never fully complete the transformation (24). Claessen and Skalnik (25) distinguish various types of early states, such as the *Inchoate Early State*, the *Typical Early State*, the *Transitional Early State*. On operational level, however, two types of states are generally recognized: *Territorial state* and *City-state*. The distinction between these two types of states, as they are associated with early civilizations, rests not only on the size of territories but also on differences in the nature of their urban centers and in their economic and political organization. Each of the civilizations studied so far by social scientists consisted of city states or territorial states but not both. The Indus Civilization seems to be an exception as it has been studied from both angles.

The distinction was foreshadowed when Childe first contrasted the development of civilization in Egypt and in southern Mesopotamia, He noted that in southern Mesopotamia monumental architecture, luxury crafts, and writing had developed within a network of small city-states, while in Egypt similar developments had occurred under the sponsorship of a single royal court, all the tiny chiefdoms and early states that had evolved along the Nile River north of Aswan during the late fourth millennium BC having been untied under the enduring sovereignty of a divine monarch. He attributed this difference to variation in natural settings and in the techniques devised to extract surpluses from peasant producers. This distinction was adopted and extended by Henri Frankfort (26) and more recently by Charles Maisels (27).

Many anthropologists do not accept this dichotomy. The majority of these see civilizations as evolving in a unilinear fashion from something resembling Colin Renfrew’s early state module into city-states, territorial states, and finally empires (28,29,30). In this scheme, city states and territorial states constitute successive stages in the development of larger and more complex polities rather than alternative forms of political organization that occur at the same level of complexity. Michael Mann (31), who emphasizes the logistical problems inherent in controlling preindustrial societies, argues

that small city-states were of necessity typical of early civilizations, although he acknowledges that ancient Egypt and China developed larger and more unitary states at an early period. It has also been argued that the hegemonic patterns in both Mesopotamia and the Valley of Mexico provide examples of city-state systems evolving towards territorial states .

Marcus (32) maintains, in contrast, that the first states to appear in any region were territorialstates, most of which later broke apart to produce clusters of city-states. She regards it as unlikely that a group of chiefdoms could evolve directly into a set of city-states. The development of extremely large urban centers at very early stages of civilizations such as Uruk in prehistoric Mesopotamia, Teotihuacan in the Valley of Mexico, and EI Mirador in the Maya lowlands offers apparent support for this scenario. While much remains to be learned about how the earliest civilizations developed, the long persistence of both types in different regions of the world suggests that territorial states and city-states are stable alternatives rather than sequential stages in the development of more complex societies (2).

Trigger agrees (2) that larger political entities must have evolved from small-scale beginnings. Yet it appears that the rate at which largersize and complexity developed differed significantly from one early civilization to another, as did the relations among political and cultural variables. In trying to impose a unilinear scheme on the development of Egyptian and Mesopotamian civilizations, Steward (33) was forced, by the primary importance that he accorded to political criteria, to equate the Late Pre-dynastic period, which immediately preceded the political unification of Egypt, with the Early Dynastic period that preceded political unification in Mesopotamia. Yet in Egypt the Late Predynastic period preceded the development of significant monumental architecture or an elite art style, while in Mesopotamia these features were already present long before the Early Dynastic period.

Renfrew's early-state module, a political unit occupying approximately fifteen hundred square kilometers with a population averaging about ten thousand people and a principal settlement near the centre, resembles a small early city-state, but it fails to capture the considerable variation in size and political organization that was exhibited by the early states that European explorers encountered in places such as Buganda, South Africa, Hawaii, and eastern North America. The evidence suggests much greater diversity in political organization than can be accounted for by a unilinear evolutionary model. The distinction between city-states and territorial states is an attempt to recognize that diversity (2).

Formation of State: State formation is a major field of research in world history, and crosscultural comparative studies flourish among historical sociologists, political scientists, economists, and prehistorians. Their core questions vary. Some ask why humanity moved away from egalitarian communities toward stratified ones; others, why centralized power has taken the particular forms it has in different parts of the world; others still, how individual agency and structural constraints interact in the centralization of power. Every dimension of the human experience is implicated, from evolutionary theory and economics to cross-cultural encounters and gender ideologies. State theorists regularly claim that they are explaining the motor of history.

An immense volume of literature is available on various aspects of state formation in ancient societies. Despite the great advances that have been made in recent years in understanding complex societies, much about their origins remains controversial and there is by far no agreement on why states evolved and how. It is still one of the most fundamental problems in anthropology. Yet only in the last 30 years has it begun to receive the attention it deserves and once it became a focus of theoretical interest, state formation was written about with increasing frequency. For the first 2 million years of his existence, man lived in bands or villages which, as far as we can tell, were completely autonomous. Not until perhaps 5000 B.C. did villages begin to aggregate into larger political units. But, once this process of aggregation began, it continued at a progressively faster pace

and led, around 4000 B.C., to the formation of the first state in history.
Although it was by all odds the most farreaching political development in human history, the origin of state is still very imperfectly understood. Indeed, not one of the current theories of the rise of the state is entirely satisfactory. At one point or another, all of them fail. These theories rest on the assumption that the roots of all prehistoric civilizations lie in earlier and simpler kinbased societies, which in many respects resembled the various ‘primitive’ societies of historic times. This assumption led to widely used classification of human societies into pre-state (bands, tribes, and chiefdoms) and state-organized societies (city-states, territorial states, kingdoms, empires). As discussed earlier, implicit in all these discussions is the notion of cultural evolution, a process of cultural change through which most of the human societies passed on their way to civilization. There are, however, other thinkers who believe that human societies have evolved along many branchlike tracks and such ‘multilinear evolution’ at a general level is a fundamental tenant of most anthropological theorizing about the origin of states such as that arose in Mesopotamia, China, and possibly in the Indus Valley in the middle of the third millennium BC.
Of the many modern theories of state origins that have been proposed, we can consider only a few. Those with a racial biases, for example, are now so thoroughly discredited that they need not be dealt with here. We can also reject the belief that the state is an expression of the “genius” of a people, or that it arose through a “historical accident.” Such notions make the state appear to be something metaphysical or adventitious, and thus place it beyond scientific understanding. The fact is that origin of the state was neither mysterious nor fortuitous. It was not the product of “genius” or the result of chance, but the outcome of a regular and determinate cultural process. Moreover, it was not a unique event but a recurring phenomenon: states arose independently in different places and at different times. The major lines of thought seem to be (34):
1. *Increasing Complexity:* One of the first anthropologists to look at the question of rising complexity was V. Gordon Childe. Childe suggested that civilization in the Near East resulted from increasing specialization caused by technological innovations, which allowed for increased production and the accumulation of surplus. He also believed that specialization of labor began with itinerant experts. If a single village could not produce enough surplus to sustain a craftsman, he would take advantage of the resources of several outlets. Specialists left kinship groups and had to form new institutions, which society changed to accommodate the rise in specialization and exchange. Childe believed that urbanism "rescued" craftsmen from nomadism and guaranteed them security in a new social framework.
2. *Managerial.* As societies come under stress, or as population increases, integrative requirements may arise that can be resolved by the emergence of managerial hierarchies. Examples of this approach include:
(a) Wittfogel's argument (35) that the need to mobilize labor for construction of irrigation works, and the need to manage established water control facilities, necessitates authoritarian government. In this model, leadership develops along with the use of irrigation system. As the systems grow, leadership is required to not only continue to construct new canals but to maintain old ones and, most importantly, ensure water is delivered to where it is needed. Karl Wittfogel pointed out that early civilizations appeared in regions where large-scale irrigation agriculture was practiced. He attempted to explain the major political systems of the world through control of irrigation agriculture in "Oriental Despotism" (35).
It is clear that Wittfogel's ideas don't work for all circumstances. There are, for example, several modern communities in Pakistan where small-scale cooperative irrigation works exist without centralized external control. As well, available archaeological and historical data imply that large-scale irrigation works were not prevalent in Mesopotamia until long after the rise of the state.

Similarly, there is no clear evidence that the Harappans, the Mayas, and the Incas had any extensive irrigation system.
(b) Wright's and Johnson' suggestion (37) that increasing need to process information, arising from ever increasing information sources.
(c) Isbell's (38) elaboration of the classic argument that economic differentiation within a society requires centralized, hierarchically managed storage and redistribution of goods and produce; and
(d) Rathje's (39) proposal that management of external trade, and critical imports, lead to complexity.
3. *Internal Conflict*. Theories within this school postulate that class conflict is the prime mover behind complexity and state formation. Fried (16), along with some other Marxist writers maintain that the state emerged to protect the privileges of a limited few with preferential access to resources. Childe's views were similar (8).
4. *External Conflict*. Carneiro (40) argues that in circumscribed environments (bounded environments from which emigration is not feasible) stresses lead to conflict, while success at war necessitates the development of institutions to administer conquered groups. Webster (41) has a different emphasis. He suggests that effective domination is impossible in chiefdoms, and that warfare in any event can offer only a short-term advantage. But a constant state of tension places a value on stable leadership and dampening of within-group competition. At the same time, acquisition of land, through conquest, that is outside the traditional system, gives elites a capital resource that can be used to create new kinds of patron-client relations.
5. *Changing Social Institutions:* Steward (42) suggested that at the core of the urban transformation was a changing, functionally interrelated group of social institutions that accompanied population growth. He believed that the core was characterized by the structural relationships of interdependent institutions and that each society derives its distinctive set of social systems from its institutional core. He saw the rise of civilization as a series of successive, major organizational levels.
6. *Ideology:* There is a more recent school of thought led by archaeologists such as Conrad and Demarest who believe that the integrative power of great art styles and religion influences complexity. The examples offered are generally from the Americas but still no coherent model has so far emerged. The role of ideology in the formation and sustenance of state is a fertile area of research in the case of the Indus Civilization and its aftermath**.**
7. *Marxist Views:* Beginning with Engel’s *The Origin of the family, Private Property, and the State*, Marxist theoreticians have always been active in the discussion on state formation. They postulated that social classes came into being prior to the state and were a necessary precondition for its development; the state arose to defend the interest of a privileged upper class against the insistent demands of a deprived lower class. Marx always regarded the material conditions of existence as primary and basic, and ideology as secondary and derivative. But Marx’s direction of causation is now frequently being reversed by his own disciples. Ideology is being made the horse and material conditions the cart. The biggest ambiguity in the Marxist theory revolves around an unresolved issue; the role of force in state formation.
8. *Trade:* Mention should also be made of the role of trade in the formation and expansion of state. Although trade is frequently mentioned as an enabling factor in the formation of state, no one seems to espouse a trade theory as such. Still, some scholars, like Ratnagar (44), put a lot of store with the long distance trade in the Bronze Age Indus and seem to assign to it an important, if not a key role, in state formation. Adams (43) viewed causation and structure of civilization from a multifaceted perspective. He stated that evidence supports the position that "the transforma

They [the Marxist scholars] postulated that social classes came into being prior to the state and were a necessary precondition for its development; the state arose to defend the interest of a privileged upper

class against the insistent demands of a deprived lower class

tion at the core of the Urban Revolution lay in the realm of social organization. For the most part, changes in social institutions precipitated changes in technology, subsistence, and other aspects of the wider cultural realm, rather than vice versa." The "Urban Revolution" implied focus on ordered, systematic processes of change that could be described in terms of a functionally related core of institutions that interacted and evolved. He attempted to avoid the term civilization by investigating the complex core of social institutions that interacted to form early state society. His model does not favor singlefactor explanations, but emphasizes complexity and systemic relationships. He envisioned three major transformations: the first two led to urban centers that were controlled by a religious elite and the third resulted in growth of secular state authority.

10. Yoffee (7) argues that the evolution of the earliest states and civilizations was marked by the development of semiautonomous social groups, in each of which there were patrons and clients organized in hierarchies, and that there were struggles for power within groups and among leaders of groups. States emerged as part of the process in which these differentiated and stratified social groups were recombined under new kinds of centralized leadership. New ideologies were created that insisted that such leadership was not only possible, but the only possibility. The earliest states were made natural, that is, legitimized, through central symbols, expensively supported and maintained by inner elites who constituted the cultural and administrative core of the state.

11. Systems theory has been used with moderate success to analyze instances of state formation among early civilizations which are known archaeologically. Examining evidence in southwest Iran from Mesopotamian sites, Wright

.......the state arose to defend the interest of a privileged upper class against the insistent demands of a deprived lower class.

Engels' *The Origin of the Family, Private Property, and the State*

and Johnson conclude that "only multiple variable changes" could produce vast shifts in the political economy and exchange networks present (54). The shift towards greater political centralization and the loss of autonomy among smaller centers may have overloaded the existing system's capability to process information, leading to the creation of hierarchies to govern the new system. While Wright and Johnson admit that their research is unsuccessful in that it is unable to answer what specific causal factors led to the creation of centralized redistributive centers, they offer a model which can be tested to explain specific instances of state formation.

Perhaps the most influential systems theorist working within a cultural evolutionary framework has been Kent Flannery (55). Flannery suggests that cultural evolution is most adequately explained "multivariant causality" in which various factors are interrelated in a complex of feedback loops, causal chains and other relationships. By rejecting "prime movers" such as population pressure or warfare, without denying the importance of such factors, multivariant causality allows that these factors may operate in different directions, and that each social system is unique.

One may debate the value or existence of Flannery's "generative rules" of the state as too simplistic or incomplete scenarios, but this objection does not require the rejection of the theory, but rather careful

research to test its validity.

Integrative and Conflict Theories: Despite this variety of theories about the origin of the state, there seem to be, as several writers have recognized, two main schools of thought. These are conveniently labeled the *conflict* and *integration* theories. Carneiro, with some twist in emphasis, labels them *coercive* and *voluntaristic* theories, respectively. These contrasting views are more than scholarly theories of political evolution: they are philosophies of politics and society whose ramifications extend far beyond academic concerns. As such, they may be nearly as old as civil society itself. Service (17), for example, traces the conflict school to Ibn Khaldun, whose *Introduction to History* was begun in 1377. Haas (45) extends the dichotomy even further, recognizing conflict and integration views in the political philosophies of ancient Greece and Confucianera China. There is thus a remarkable, continuous history to basic theories of the state.

Integrative or Automatic Theories: Integrationist, functionalist, or voluntaristic theories suggest that complexity, stratification and the state arose not out of the ambitions of individuals or subgroups, but out of the needs of society. The major elements of this approach are:
(a) shared, rather than divided, social interests; (b) common advantages instead of dominance

and exploitation;
(c) consensus, not coercion; and
(d) societies as integrated systems rather than as

stages for power struggles (46). The governing institutions of the state developed to centralize, coordinate, and direct the disparate parts of complex societies.

Integrationists argue that complexity and stratification arose because of stresses impinging on human populations, and were positive responses to those stresses. Complexity then serves population-wide needs, rather than responding to the selfish ambitions of a few. Rather, it seems to be a response to: (a) the need for regional integration of specialized or unreliable local economies; (b) the need to import critical commodities. (c) the need to process increasing amounts of information coming from ever more sources

Integrative theories hold that, at some point in their history, certain peoples spontaneously, rationally, and voluntarily gave up their individual sovereignties and united with other communities to form a larger political unit deserving to be called a state. Of such theories the best known is the old Social Contract theory, which was associated especially with the name of Rousseau.

The most widely accepted of modern integrative theories is what sometimes is called the “automatic” theory (40). According to this theory, the invention of agriculture automatically brought into being a surplus of food, enabling some individuals to divorce themselves from food production and to become potters, weavers, smiths, masons, and so on, thus creating an extensive division of labor. Out of this occupational specialization there developed a political integration which united a number of previously independent communities into a state. This argument was set forth most frequently by V. Gordon Childe (8).

This and all other voluntaristic theories of the rise of the state floundered on the same rock: the demonstrated inability of autonomous political units to relinquish their sovereignty in the absence of overriding external constraints. We see this inability manifested again and again by political units

ranging from tiny villages to great empires. Indeed, one can scan the pages of history without finding a single genuine exception to this rule (47). The answer to this objection is that integration is socially useful, and if differential rewards accrue, the loss of some autonomy is a cost that must be borne to realize the benefits of centralization.

Conflict or Coercive Theories: The most prominent advocate of conflict or coercive theory is Robert Carneiro, according to whom force, and not enlightened self-interest, is the mechanism by which political evolution has led, step by step, from autonomous villages to the state.

The view that war lies at the root of the state is by no means new. Twenty-five hundred years ago Heraclitus wrote that "war is the father of all things." The first careful study of the role of warfare in the rise of the state, however, was made less than a hundred years ago, by Herbert Spencer in his *Principles of Sociology* (47). P e rhaps better known than Spencer's writings on war and the state are the conquest theories of continental writers such as Ludwig Gumplowicz, Gustav Ratzenhofer, and Franz Oppenheimer. Oppenheimer, for example, argued that the state emerged when the productive capacity of settled agriculturists was combined with the energy of

"For that some should rule, and others should be ruled is a thing not only necessary but expedient: from the hour of their birth, some are marked for subjection, others for rule."

Aristotle

pastoral nomads through the conquest of the former by the latter. This theory, however, has two serious defects. First, it fails to account for the rise of states in aboriginal America, where pastoral nomadism was unknown. Second, it is now well established that pastoral nomadism did not arise in the Old World until after the earliest states had emerged.

Regardless of deficiencies in particular coercive theories, however, there is little question that, in one way or another, war played a decisive role in the rise of state. Historical or archeological evidence of war is found in the early stages of state formation in Mesopotamia, Egypt, China, Japan, Greece, Rome, northern Europe, central Africa, Polynesia, Middle America, Peru, and Colombia, to name only the most prominent examples. The Indus Valley seems to be an exception although the issue is still being debated.

Yet, though warfare is surely a prime mover in the origin of the state, it cannot be the only factor. After all, wars have been fought in many parts of the world where the state never emerged. Thus, while warfare may be a necessary condition for the rise of the state, it is not a sufficient one. Or, to put it another way, while we can identify war as the mechanism of state formation, we need also to specify the conditions under which it gave rise to the state.

How are we to determine these conditions? One promising approach is to look for those factors common to areas of the world in which states arose indigenously - areas such as the Nile, Tigris-Euphrates, and Indus valleys in the Old World and the Valley of Mexico and the mountain and coastal valleys of Peru in the New. These areas differ from one another in many ways - in altitude, temperature, rainfall, soil type, drainage pattern, and many other features. They do, however, have one thing in common: they are all areas of circumscribed agricultural land. Each of them is set off by

mountains, seas, or deserts, and these environmental features sharply delimit the area that simple farming peoples could occupy and cultivate. In this respect these areas are very different from, say, the Amazon basin or the eastern woodlands of North America, where extensive and unbroken forests provided almost unlimited agricultural land to which the defeated people could emigrate.

“war is the father of all things.”

Heraclitus

Marxist arguments on state formation no longer rely extensively on the writings of Marx himself; certainly, few would be found who still argue that all societies must pass through a capitalist phase before reaching ‘the end of history’ with the advent of communism. The Marxist line of thought regarding state formation generally requires the conversion of human beings and their labor-products into use by wealthy elites. As such, it is a "coercion" theory which has as its primary mechanism the interaction of material and human factors. Marxists have certainly come farther than many in their emphasis on historical processes and structural and ideological change in societies. However, many Marxist scholars still have a tendency to see state formation according to an orthodox Marxist scheme for which there is little evidence (50).

Conflict theory has reached its clearest expression in the writings of the Marxist school. The state, according to one leading conflict theorist (48), is the product of society divided into two classes: those directly engaged in social production, and those not. The surplus produced is appropriated by and for the non-producers. The state is the organization of society for regulating relations within and between these classes; the direct producers have no immediate interest in the formation of the state, the agencies of which act in the interest of the non-producers. The state is the formal organization of class-composed and class-opposed human society (48).

A conflict interpretation of human society is easy to adopt, and certainly comes readily to mind for many citizens of contemporary societies who are not in the economic upper strata. Since greed, oppression, exploitation, and class conflict obviously are characteristics of complex societies, it is tempting to see these as both the source of complexity and its dominant nature in the formation of state. Such a view is not without validity, and any theory of society must take this fact into account. But conflict theory is not completely adequate to explain how complex societies came into existence. Eisenstadt, for example, has pointed out that the failures of the Carolingian and Mongolian empires reflect the fact that such entities must be based on necessary conditions, and not solely on political goals (51).

Synthesis: As is apparent from the above, Neither of these two extreme positions is wholly satisfactory in every state, and neither is sufficient explanation in any state. As Machiavelli astutely noted almost four centuries ago, both laws and arms make a good prince, and it is impossible to have one without the other.

Conflict and integration theories seem to be individually inadequate to account for both the origin and the persistence of the state. This fact has led some to call for their combination (45,46). Governmental institutions both result from unequal access to resources, and create benefits for their citizenry. There are definitely beneficial integrative advantages in the concentration of power and authority; once established, however, the political realm becomes an increasingly important determinant of change in

economy, society, and culture. For those who are on the right side of political thought, integration theory is better able to account for distribution of the necessities of life, and for those who are on the left, the conflict theory seem to be more appealing (46).

Steve Chrisomalis (50) reviews these ideas and suggests some constructive means by which anthropologists could revive state formation as a worthwhile area of study. According to him, there appear to be four fundamental problems which state theorists have fallen under. First, too much emphasis has been placed on the dichotomy between coercive and integrative theories of the state, leading to overly polarized positions which obscure the complex reality of early societies. Next, notions of hierarchy and progress have led some to see state formation as an end point of social evolution rather than part of an ongoing process of increasing social size and complexity. Third, the systemic forces which cause social evolution to occur have been misidentified and misinterpreted by scholars under the influence of paradigms from elsewhere in social sciences. Finally, there is the allusion that state formation is a process which imposes centralization upon nonstate societies, rather than being an outgrowth of their existing institutions and historical practices.

Scholars who argue for the primacy of warfare as causal agent in state formation have generally combined the two orientations of integration and conflict due to the nature of their "prime mover". Webster notes that warfare facilitated "the emergence and survival of privileged managerial groups" (41) in order to coordinate military efforts and marshal resources. However, this integrative role is contrasted with his assertion that "concentration of power is integrally related to concentration of wealth, and derives from it" (41). This apparent contradiction suggests that while initially, the need for integration enabled meritorious or cunning individuals to acquire control over these resources, coercion and differential access to resources reinforced this position due to the resulting power differential.

Warfare may be a necessary but insufficient condition for state formation. However, this position, which has been advocated by Cohen (53) as part of complex events which synthesize various factors leading to the centralization of authority, in no way argues that warfare is a prime mover in social evolution. Neither is it difficult to accept that because cross-cultural studies do not show a correlation between warfare and territorial growth that peaceful diffusion is more likely than warfare to be the primary mechanism of selection in cultural evolution. The causes and consequences of warfare are both varied and closely intertwined with other social events in societies. Warfare is neither indicative of "coercion" nor "integration", but requires that both factors operate simultaneously. Surely we can accept that war has serious influences on political leadership and social structure without arguing that its presence somehow determines the future of the society (50).

The greatest methodological problem which scholars have faced in interpreting archaeological data on archaic states is the establishment of causal links which would support or reject the conflict or integration positions. How, for instance, can data whose date can only be placed accurately within a century be used to establish whether warfare preceded the state, or the other way around, and so on? This problem is faced most clearly by Haas (45) in attempting to reevaluate the archaeological data on the "primary civilization", and is not completely resolved.

The best evidence we have, then, suggests that both coercion and integration have their place in state formation. One can offer the complementary proposition that the dichotomy between the two is both unnecessary and unimportant. Whether a mechanism is coercive or integrative is not the primary

determinant of its importance for the formation of states. The excessive focus on the polar opposition of these two principles may stem from the philosophes and their proposals of "social contract" and "social coercion", neither of which were based on any real evidence, anthropological or otherwise (50).

Studies of other early states reveal similar patterns of variability of rule. For example, new interpretations of textual sources from southern Mesopotamian, once the iconic exemplar of a rigidly centralized state, indicate that even though rulers dominated aspects of the political economy, many other segments of the society received land grants, carried out independent production and consumption, and owned date orchards and sometimes grain fields. Urban spaces in Mesopotamian cities were not segregated by wealth. Large, well-appointed "houses were nestled alongside small, poor structures [and] an important official could live beside a humble fisherman" (57). Postgate (58) suggests that the administration of Mesopotamian cities was by consensus of the local councils. The latter comprised males of the town who served as elders in local institutions.

Other examples come from closer to home in South Asia. In the Indus Valley, during the Mature Harappan period, there are few signs for monopolization of wealth and power by a selective group of people and more indications of autonomous control by diverse groups. These data provide a picture "of urban residents who were both independent and connected to the public sector" (57). Some states in early historic South Asia were administrated by monarchs, whereas others are described as "republican". Republican states were ruled by a council in which leaders were drawn from the leading families in the city. People in the city belonging to merchant and ritual specialist groups, and leading families participated in daily meetings of the council.

After the Indus civilization was long gone, historical states reveal similar patterns. In research at the fourteenth-through seventeenthcentury A.D. state of Vijayanagara, Sinopoli (59) has documented (through archaeological and textual sources) a vibrant economy comprised of people engaged in many different occupational activities in a political economy that was independently organized under the auspices of kinship, guild, and other nongovernmental groups.

The theory of the early state incorporates also an understanding of its inbuilt instabilities. State structures and power relationships are 'volatile' and conflict is inherent (51). The emergence of the state and the assertion of territorial boundaries can cause migration or resettlement of groups; there are invariably disinherited and relocated people, such as vanquished enemies and repeatedly-raided frontier peoples, and, quite significantly, even uprooted craftsmen. It could be argued that the grid plan settlement which characterizes Harappan urbanism is specific to new or reIocated towns, or towns laid out afresh, that could not have grown out of old village origins.

Elman Service has hit upon one of the main reasons for our disorientation with regard to the evolution of state. He notes that long-standing states have acquired in their later history so many functions and features that their *original* functions are often obscured (17). This is an important point. The behavior of states at the point where they come to be studied by social scientists may have little relation to the reasons for their emergence. Furthermore, the evolution of states subsequent to their development may respond to a variety of new factors, including both internal and external political situations. These factors may make it difficult to ascertain the nature of the early, emerging states. Some modern theories have not taken this into account to the extent desirable. Similarly, though, many theories of state origins do not account for the persistence of this form once established (60).

These theories pertain to the emergence of pristine or primary states, those that arose independently in various parts of the world. States are dominating, expansive organizations, and they have a competitive advantage over less complex social forms. They tend thus to either spread, or to stimulate developments among their neighbors. The emergence of complexity among the competitors and trade partners of states yields the process of 'secondary state' formation. So far as is known, there have been only six instances of primary state formation. These are: Mesopotamia, Egypt (*ca.* 3500-3000 B.C.), China, Indus River Valley (*ca.* 2500 B.C.), and Mexico and Peru (ca. 0 A.D.) (18). Some experts challenge the degree of independence of several of these developments, but that matter need not concern us here.

Archaeological interpretations of early states have recently moved away from the statedependent model as new evidence has come to light that has altered our understanding of the authority structures of early states. For example, McIntosh (56) describes the city of Jenne-Jeno in the Middle Niger (400 A.D. to 1100 A.D.) as a selforganized, corporate community in which multiple authorities existed, none of which monopolized power. Under different circumstances, the Maya civilization (300 A.D. to 900 A.D.) was less centralized than once thought. While the great Maya Lords did control the acquisition of statusenhancing goods such as jade, shell, magnetite, and quetzal feathers, their vast and varied agricultural system was maintained by local groups.

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Chapter I.2.

Harappan Society - An Overview



Several aspects of the Indus Valley Civilization - its *raison d'etre*, evolution, character, and particularly its decline and ultimate end are still subject to investigation and the

problems of social organization are almost the least examined aspects in the extremely rich archaeological literature. The reason is obvious: these are the areas where the lack of written sources and comparative studies, which alone could fill up the gaps, are most painfully felt. The situation is not entirely hopeless, though; there are many lines of evidence that have been followed by scholars and some of them have resulted in a convincing reconstruction of how the Harappan society developed and how it functioned. The questions of social stratification, class structure, and political control are some of the burning issues in the current historic research.

The questions are asked: What was the extent and nature of social differentiation and stratification in the Harappan society, what was the process of the emergence of this stratification, and how did it resemble or differ with the other contemporary civilizations. What was the socioeconomic base of the Harappan cities, how did different strata of the society interacted with each other and how did cities relate to the surrounding rural hinterland? Apart from these diverse aspects of the Harappan society, there is the overarching question: how was this society organized politically. The production of surplus, its acquisition by the ruling class, and its distribution or collective use, must be a quite complicated arrangement and that itself calls for an incisive enquiry. The question of slavery or the state’s right to demand labor from its citizens is equally important. Furthermore, the existence of an incipient caste system, which has been a hallmark of the South Asian society, including Pakistan, for so long, is an academic and historic issue that has recently come in the forth. Towering over all this is the fundamental issue: how complex was the Harappan society as to be designated as an urban civilization?

A definite answer to these questions is not possible but a general picture does emerge as we ponder over the archaeological remains and compare them with those of the other early civilizations which have left behind some written material and for which considerable more is known. Mesopotamia is one such example. The study of the sociopolitical organization of the Harappan society is therefore intimately connected with similar studies on other ancient cultures. These studies are diverse, mostly describing the individual civilizations in isolation, but there have been a few attempts that bring this

vast area of scholarship at one place and then look at it to see if they have some common features of social organization or to observe if their was a common path of their political development. If not, then, how did they differ and, if possible, why. Most of these attempts focus on Mesopotamia and Egypt and lately on the emerging societies of Central Asia and Mayan civilian of Mesoamerica. Unfortunately, the Harappan Civilization has been the least used and least influential example in such studies. In spite of this obvious neglect of the Indus Civilization these comparative studies are nevertheless of much usefulness and we will make reference to these comparative studies as we proceed.

This chapter is dedicated to an overview of the Harappan society in general but concentrating on a few issues in particular; the question of political organization is to be addressed only briefly as it is the focus of three subsequent chapters. Religion is an integral part of social organization of any society, ancient or modern. But, since the Harappan religion is to be covered separately, we shall not include it in this overview.

It is obvious that in the absence of any written record, the people living in the prehistoric Indus Valley can only be defined on the basis of the archaeological remains which they left behind. This means the Harappan people are described by their pottery, the artifacts they fabricated, the ornaments they adorned with, the types of houses they lived in and the food that they ate. Their origins can be roughly traced by following the development of specific artifact types and delineating the distribution of these artifacts across space (1). Their distribution can tell a lot about the social differentiation and stratification of the society.

Closely connected to the organization of the Harappan society into towns and cities is the question as to how these urban centers related to the rural economy that apparently sustained this civilization. Furthermore, we wonder if these agricultural villages were intimately integrated with the regional or the central economy of the land or if they existed merely as isolated groups of agricultural settlements unconnected with the equally isolated urban islands existing in their midst. Unfortunately, however, most of the models of socioeconomic organization of the Harappan people focus on the cities, assuming that the villages would have been altered by the centralizing effects of urbanization. They assume that the daily activities of the smaller rural settlements would have been integrated into the overall structure of the dominant urban centers through control over the production and exchange of agricultural goods. This is, however, an assumed truth, not necessarily based on archaeological facts. Evidence is increasingly accumulating that the Indus villages were not merely centers of food production for the cities but were largely socioeconomic units onto themselves. The idea of the Harappan ‘autonomous’, ‘self-sufficient’ villages is lately gaining strength.

We must not also forget that a large proportion of the population was still nomadic and they made their living through full time pastoralism instead of agriculture or crafts. The presence of this socioeconomic sector within the Indus system has added unforeseen and archaeologically invisible additions to the variables characterizing the social organization of the Indus Civilization. This sector of society, along with that of the nomadic pastoralists, obviously needed different political and social organization (2,3). Thus, we are faced with the task of examining the social and political structure of the Harappan people from a wider perspective although our focus still remains on the social and political organization of the urban centers of the civilization. One reason for this lopsided focus is the fact that we do not have much information about the Harappan villages, much less on pastoral communities and hunter-gatherers.

The Harappan Civilization is perhaps unusual in the degree to which we are entirely reliant on archaeological materials for its interpretation. The Harappan script has not yet been deciphered, and there is no writing of a later period, for example by successors, conquerers, or colonists, which clearly refers back to it and provides a basis for its description. Although there have been a number of important recent excavations and reanalyses of the old data, the total archaeological evidence is still sparse compared to, for example, the Near East. Add to it the quite liberal interpretative license that some of the archaeologists working in India have appropriated to themselves, of course, along with appropriate 'archaeological data' and 'recent discoveries', to propagate some preconceived ideas about the origins of the "Indian Civilization". This scarcity of evidence and this muddying of archaeological water poses considerable problems in the study of the social order of the Harappan Civilization.

Even if sufficient archaeological material were available and even if the dark shadow of 'Vedic scholarship" is lifted, there are several other impediments in the way of impartial and objective analysis of the subject matter. As Miller (4) and Guha (66) point out, the same evidence could lead us to different, even contradictory, conclusions. An ideological representation suggested from burials may be that of an ideal, for example, of egalitarianism, denied by the degree of hierarchy found in control over material resources or esoteric knowledge. A particular array of forms may represent the interests of a particular group and mask those of subordinate elements in society who have no access or control over the forms taken by cultural property.

The available analyses of the social structure of the Harappan society have tended to divide into separate topics such as homogeneity of material culture, class differentiation, political organization, trade, art, and religion, and this has been done here too. An ideal method would be, however, to examine each topic in context with the other. Such a "contextural" approach is not yet been taken by anyone for the obvious difficulties of its vastly expanded scope. As stated in the last chapter, the study of social organization of an early complex society, such as that of the Harappan Civilization, cannot be particularly divorced from religion. Although this topic has been discussed in this book in a separate section, we must keep in mind that this aspect of ancient history cannot be studied independently; reference to the general make-up of the society is necessary and the social norms or traditions must be searched in the prevailing religions.

The origins of the Indus Civilization and its social organization is a hot topic of archaeological research at the present time. There is the question as to how this social complexity arose, how it related to simple segments of the Indus population, how did it organize politically, how it expanded, and above all, how did it maintain itself for almost 700 years without much change. Anthropologists and archaeologists have long been interested in these questions, and the origins of civilization in general, and the social and political organization of the Harappan society in particular have naturally come under their scrutiny. Most of these discussions are, however, either too descriptive without any centralized theme or too theoretical to be of any use to anyone who wants to concentrate on the Harappan Civilization rather than investigate the general aspects of the evolution of cultures in the abstract. The result is that we are still not any closer in understanding the developmental process of the Harappan social structure than we were, say, a few decades ago.

Following a brief account of the pre-urban cultures as a background for the development of the Indus socioeconomic structure, the material available for the Harappan Civilization will be discussed, followed by discussion of Harappan settlement, apparent cultural homogeneity and artifactual

standardization, social differentiation, and political structure.

The Development of the Indus Socioeconomic Structure: Although our focus is on the Harappan Civilization at its peak, a brief look on human settlement that preceded urbanism is essential in appreciating the underlying foundation of this civilization. Understanding how the Indus Civilization emerged and how its political economy functioned requires taking a long-term perspective and tracing out developments that led to the settlement of cities. In this section, we outline the key transformative points in the development of the Indus Civilization, providing a basis for discussion that follows.

Going back in time and tracing the origins of the Harappan society, our evidence for the sequence naturally starts with Mehrgarh. Archaeologists have revealed a sequence suggesting settled occupation with agriculture from at least the seventh millennium BC, gradually developing a more sophisticated material culture, trade, and complexity of social organization (5). Although this beginning seems to an indigenous phenomenon, archaeologists have drawn our attention to the strong ties between the material remains here and sites in eastern Iran and Central Asia even at this early time.

By the fifth millennium BC, there is evidence for larger buildings representing some form of communal activities at Mehrgarh. By the fourth millennium BC there are sites spread throughout the area covered by modern Pakistan, with regional sequences showing signs of growing complexity there too. These have been grouped under the general label of “Early Harappan” on the ground that many of these developments, such as town walls and stylistic features of material culture, document traits which become prominent in the Mature Harappan, though not all of this area become incorporated within the boundaries of the latter. There is evidence at this stage for larger sites with a greater degree of order and more complex buildings than in the earlier, simple villages. Goods such as marine shells and lapis lazuli whose sources are known at long distances testify to a system of long distance exchange. Evidence for craft production, fortifications, and street planning all are suggestive of the kind of culture that was to emerge.

Early Harappan phase sees the development of regional styles which may represent competitive groupings, discussed in Volume II (*A Prelude to Civilization*) in greater details. Briefly speaking, during the Early Harappan period (*ca.* 3200–2500 BC) there were four roughly contemporaneous archaeological cultures (Kot Dijian, Amri-Nal, Damb Sadaat, and Kulli) without large settlements or strong signs of urbanization. Some degree of craft specialization starts to be already visible.

At about 2600–2500 BC a transitional stage occurred between the pre-urban and the urban cultures, during which most of the complex sociocultural institutions of the Indus Civilization came together. The urbanization that occurred, happened rather suddenly, over a period of about a hundred years. After a short period of growth and change, the peoples of the Greater Indus Valley created cities, a writing system, and most likely a class-stratified society. Of course, some parts of older traditions of the greater Indus region survived. It is clear that there was little change in subsistence and the sociocultural, economic, and political balance between farmers and pastoralists, for example.

Mughal (6) shows that virtually all the familiar Harappan items are found somewhere in the Early Harappan period, though their organization may be quite different. The Harappan Civilization represents a fusion of elements from previous regional traditions, resulting in a much more homogeneous material culture, so that sites can be recognized with little difficulty as Harappan. This

transformation was achieved over an area previously unmatched. Over a million sq. km, the area covered by this civilization, is larger than the combined upper and lower Egypt or alternatively the total area of Sumer, Akkad, and Assyria; its center being the Indus River but spreading eastward up to the edges of the Indus basin, to the north across the Punjab, and to the west across the Pashtun country into the Hindu Kush Mountains. A relatively uniform range of pottery styles and other types of material culture, including seals and ritual symbols, has been found at more than 500 sites spread throughout the greater Indus Valley.

At the same time, there was a radical change in social organization; the kinship relationships, which were the hallmark of the Indus society till then, changed to a transactional relationship between strangers. The society as a whole became complex and people became increasingly interdependent on each other for their economic activities. A sector of the population left food production altogether and became specialized craftsmen, artisans, or engaged in full-time trading activities. These non-producers were sustained through the food surplus that was extracted from the surrounding peasantry by an elite through coercion or through persuasion. The nature of this ‘surplus’, the composition of the nonproducers, and the ways and means of extracting and redistributing the surplus distinguish the Harappan Civilization from the other contemporary civilizations.

This urban stage signifies radical economic and sociopolitical changes. The economic base is very crucial, for now had come into existence efficient means of production, including metal technology and alloys, which were systematically exploited. This was possible because of the presence of specialists in the nonagricultural population. The extensive evidence of trade and commercial exchange implies equally extensive developments in the realm of socio-religious, political, and ideological exchange. We know that between West Asia and Indus Valley settlements, such exchanges were no doubt taking place. Intermediary regions gave impetus to trade, controlled the exchange of raw material, metal technology and various goods. All these processes taken together led to different levels of sociocultural complexities, and to that of urban revolution.

Integral to this change was the social division of labor, especially manifest in the city where people interacted less as kin than as people de

Sites of the Harappan Civilization - *Allchin and Allchin*

of writing. Seals were devised as marks of identity and authority in this world in which exchanges were not always with known persons, and generally of an impersonal nature. Some of these notations no doubt served as magical spells to ward off evil or to invite prosperity.

Lamberg-Karlovsky (7) and Ratnagar (12), among others, have discussed various aspects of trade between the Indus Valley, the Persian Gulf, and Mesopotamia, which in the wider sense means a reciprocal traffic of materials or goods directed by human agencies from one place/or individual to another. It is noteworthy that informal non-centrally administered processes gave impetus for the development of sociopolitical relations not only between West Asia and the Indus Valley but also within the sphere of each civilization. Thus, it is by the beginning of 3000 B.C. due to the stimulus of reciprocal trade and of the sources

pendent on one another for goods or services. People came to have many other interactions - albeit momentary - with others, and to play a greater number of roles in society. This in itself entailed the advent of new phenomena like public buildings and public utilities, high-built citadels for elite

activity/residence; new mechanisms for communication with non-kin; and methods of recording and accounting, the last entailing the use that there is a nucleation of such centers such as Kulli, Amri, Kot-Diji, etc., leading to a culmination in the mature Harappan Civilization.

At this stage the Indus Valley appears as one of a number of areas moving toward a greater degree of social complexity and urbanization. Much continued as before in the villages, but there were now also exchanges with the emerging towns and exposure to the demands of the elite for labor service; there were new craft items aboard, new tastes and consumption patterns evinced in the lifestyles of the elite, and new artistic and intellectual norms. Constituent communities ranged, in a folkurban continuum, between the tribal communities, the peasant villages, supra-village chiefdoms, the defensive outposts, and the culturally diverse cities. We also see the emergence of rituals, magic, shamans, and all that which goes by the name of religion. This was also the time during which the Indus

ideology, or world view, began to emerge.This urban stage signifies radical economic and sociopolitical changes and it is in this context that the idea of 'explosive emergence' of Harappan Civilization may be seen.

As the Indus Valley was being urbanized, its contacts with the outside world intensified and these economic relationships, especially with equally urbanized society of Mesopotamia, must have helped in furthering the ongoing processes of social development in all these societies. The areas of Western Asia may, thus, have played an important, although indirect, role in generating the processes of concomitant sociopolitical development as a feedback system. Of course, this is not to deny the major contributions of the regional Indus cultures, that preceded the Harappan urbanism. Daniel Miller, in one of his lengthy articles (4) deals with a merchant class that emerged through a sequential growth during the Early Harappan period and got strengthened as the process of urbanization got its momentum. This economic elite, in conjunction with a large array of artisans, then shaped the Harappan society which was sustained for half a millennium in the Indus Valley and the surrounding areas.

The process of Harappan urbanization is believed to be an accelerated one. Possehl (9) has pointed out that in a small time interval of about 100 to 150 years around 2600 BC, the civilization seems to have transformed from Preurban to urban society with sudden emergence of the following features:
1) writing on well designed and carefully made seals with high quality animal motifs;
2) town planning and development of:

a) massive brick platforms,
b) well-digging,
c) drainage system,
d) City planning

3) appearance of widely used system of weights and measures;
4) other changes in a wide variety of lifestyle material such as ceramic corpus;
5) new art forms and stylistic growth such as new human and animal figurines;
6) distinctive Harappan black-on-red slip painting style;
7) core trends of urbanization such as:
a) social stratification,
b) apparent emergence of political con trol,
c) craft and career specialization, d) creation of cities and a new form of social regulation.

Possehl notes that these changes were in continuity rather than discontinuity. Politically, it seems that around 2500 BC, the Indus society transformed from a collection of autonomous villages to a loose confederation of city-states or even to a territorial state (see the next three chapters for discussion). All this seems to be arising from internal dynamics but, as stated above, the contemporary civilizations to the west of the Indus Valley may have also played an important role. Possehl (10) has listed more than 2,000 sites that were part of the region that marks the spread of the Harappan Civilization at its peak. However, most of these sites are small to medium sized settlements and less than 10 sites have an area exceeding 0.5 sq.km (11). The urban centers continue to be surrounded by smaller sites indicating that the formation of an urban center neither stunted the sustenance of small habitation sites nor did it destroy them. This suggests that the relation between the urban and rural sites must have been more symbiotic rather than adversarial.

The people of the Indus Valley were not alone in this pursuit of urbanization; other peoples in Mesopotamia, Iran, and Central Asia were also going through these changes toward civilization, although their regional sequence were somewhat different. A number of well-developed urban cities arose in Mesopotamia and quite a few population centers developed in Central Asia and Iran which eventually lead to highly developed incipient state-level societies with towns and monument structure. Most significant were Shahr-e-Sokhta and Mundigak in the Helmand area (12) and *Tepe Yahya* and *Namazga Tepe* in Central Asia. Complex settlement hierarchies, specialized crafts, and the kind of production and control over goods similar to the Indus Valley are evident. In some cases the influence of the core region of Mesopotamia and the Indus Valley can be directly adduced. These intermediary regions gave impetus to trade, the exchange of raw material, and metal technology. All this suggests that various civilizational spheres were interacting with each other at cultural, economic, social, political levels.

Harappan Cities and Towns: A distinguishing feature of cities is that they are homes to diverse social groups that are drawn to them as major centers of economic, political, and ceremonial life. We know from excavations that the urban Harappans lived in densely packed neighborhoods and engaged in diverse occupations. Although Harappan society was largely agrarian, based on agriculture and animal husbandry, many specialist craft producers lived in the city. The diversity in cities had social as well as economic and political dimensions.

Of the excavated settlements of the Mature Harappan, that which has dominated most accounts, being the largest, best preserved and most extensively excavated, is Mohenjo-daro. It has been amply described in Volume III (*Harappan Civilization - The Material Culture*) of this series. Briefly speaking, the major features of the site are as follows: It is divided into a higher mound conventionally called ‘citadel’ to the West, and a larger mound called the ‘lower town’ to the East. The orientation of both is north-south. It is clear from excavations that the lower town consisted mainly of residential and commercial buildings, and the major streets are aligned on cardinal points, while the citadel consists of, in the main, if not entirely, of public buildings. These latter are arrayed on top of a large, high platforms built of solid mud brick with baked brick facings. The most striking of these public buildings, situated near the apex of the mound, is a large bath. The citadel is probably walled, although this has only been documented at one corner. Recent indications are that there was not one but more than one ‘lower towns‘ and they were most probably individually walled.

These basic features provide a model against which other sites have been compared. The only excavated site of comparable size is that of Harappa, around 600 km to the North. This site was much more poorly preserved, but as far as it is possible to tell, it was also divided into several mounds. Again, the main residential mound is to the East and the excavated public buildings are found by the river to the north of that mound which would be equivalent to the citadel at Mohenjo-daro. The inside of this citadel mound is so badly damaged that apart from the fortifications it has been impossible to

interpret the remains within. Further details of this site can also be gathered from Volume III (*Harappan Civilization - The Material Culture*) of this series.
dential buildings at the lower end. Large-scale storage facilities are known from some of these settlements, such as Lothal, Harappa, and Mohenjo-daro. Generally there was also an attached, unwalled suburban residential area, presumably housing workers and service personnel, while those responsible for running the establishment occupied housing on the citadel or in the walled town.
In addition to these five cities, there were a large number of Harappan settlements which can be characterized as towns. They were generally small, around 4 to 16 hectares. Many of them shared several features of the larger cities, such as the division into separate walled mounds or areas, the efficient drainage system, and the wellbuilt houses. Often these towns had substantial industrial areas, producing a range of artifacts, and they were well supplied with the high-caliber standardized craft products characteristic of the

Chronology of the Indus Civilization **Period Date Regional cultural phases Modern regions**
Early Harappan
Early–Mature Transition Mature Harappan

3200–2600 BC Amri-Nal
Kot Diji
Damb Sadaat

2600–2500 BC
2500–1900 BC Sindhi Harappan Baluchistan, Sind, Kutch North Sind and elsewhere Central Baluchistan

Sindh Kulli Harappan Baluchistan Sorath Harappan Gujarat, Saurashtra Punjab Harappan Punjab

There is another Harappan city (Ganweriwala, in Cholistan) of comparable size and situated almost equidistant from Mohenjo-daro and Harappa. This settlement has not yet been excavated and, consequently, our information on it comes only from surface surveys. In addition, there are two other, urban settlements, Kalibangan in the Indo-Gangetic Divide, and Lothal in Gujarat, both in the present-day India, just across the Indo-Pakistan common borders. Compared to Mohenjo-daro, Harappa, and Ganweriwala, both of these settlements are of relatively small area but quite adequately excavated. All these five Indus cities shared several common features of urban layout, which are more vividly observable at Mohenjo-daro.

The site of Kalibangan shows the closest similarity of layout with Mohenjo-daro, being divided into a citadel and a lower town, also walled. The internal layout reveals clear town planning, that is, streets aligned on cardinal points and meeting at approximately right angles. At Kalibangan the citadel itself is divided in two by a wall across its center. At Lothal, however, is found only a single mound surrounded by a wall, but again divided into an area of public buildings, based on mud-brick platforms, at the higher end, and resiIndus Civilization. These included fine pottery, tools of high-quality flint, a range of generally simple metal artifacts, many charming terra-cotta figurines of humans and animals, inscribed seals, and a great variety of personal ornaments made of shell, gemstones, metals, and several manufactured materials including faience. In addition, there must have been many fine products in materials that have perished but of which few traces survive, such as wood and textiles.

While some towns had many functions residential, industrial, religious, and administrative - and served their local area, others seem to have had a more focused role, related to regional trade. These were entry or transit points for goods and materials, located in key places with respect to resources and communications. Those at the interface with the outside world, in the Makran, in Gujarat, and perhaps on the margins of Baluchistan, had strong walls. Some also processed local raw materials on an industrial scale. The main role of these settlements would have been to acquire and, if relevant, process raw materials and finished goods from neighboring areas and to organize their distribution to other parts of the Indus realms or their dispatch as trade goods. Examples of this type of towns include Shortugai, Sutkagen-dor, Sokta Koh, Pathani Damb, Chanhu-daro, Kalibangan, Bananwali, Balakot, Allahdino, Surkotada, and industrial sites like Nausharo.

Harappan urban settlements, of whatever size, from 150-hectare Mohenjo-daro to l.4-hectare Surkotada, generally shared a number of features: the use of bricks of uniform proportions (1:2:4); efficient provision of water and sanitation; workshops and other industrial facilities; well-appointed housing; cardinally oriented streets; and the use of baked brick, particularly for bathrooms, drains, and wells. Generally, walls surrounded the settlement or separate parts of it, some freestanding while others providing revetment for foundation platforms.

These features, however, were expressed in very different ways, both from one settlement to another and from region to region. Stone, for example, was rarely used in architecture except in Gujarat and coastal area of Baluchistan where it was common; Mohenjo-daro and Chanhu-daro were unusual in their very extensive use of baked bricks for building houses. Water facilities also varied markedly; for example, Mohenjo-daro had seven hundred wells, whereas Harappa, near a river, had only a few, and Dholavira (in Gujarat) had huge reservoirs. Settlements varied in the degree to which they were planned: In some (for example, Mohenjo-daro), the north-south orientation of the main streets resulted in a grid plan; in others (for example, Banawali), there is much less apparent order; and a few did not even adhere to cardinal orientation.

Although the evidence is limited, it is likely that the Indus cities were the administrative, religious, economic, and social centers of their respective domains and that a significant proportion of their residents were engaged in nonsubsistence activities. The central location of Mohenjo-daro, its size, and its unique features, particularly the Great Bath, suggest that this city may have been the capital of the Harappan polity, but this is by no means proven and Harappa and Ganweriwala may have enjoyed equal importance. According to some other opinions, however, the Harappan cities were not administrative centers, rather, every city arose for different reasons and performed different functions. For example, Mohenjo-daro could have been mainly a ceremonial center, Harappa could be a trade center, Lothal an industrial site, and so forth.

While a general similarity of the Harappan settlements in multiple-mound settlement, elaborate town planning, and architectural features, is generally accepted as an archaeological fact, Fentress (13) has shown that previous excavators have exaggerated the similarities in general layout between Mohenjo-daro and Harappa and, by implication, between other Harappan cities and towns. Most archaeologists have commented on the elaborate colonnade, pillared corridor, and sunken pool at Mohenjo-daro, which has no counterpart in other cities. The "workmen's platforms" at Harappa, whatever their function, are unique. Although Wheeler had thought that both Harappa and Mohenjo-daro had granaries, this interpretation is now in doubt given the absence of grain or food-processing equipment at either location.

These differences suggest the presence of localized authorities capable of investing substantial human labor in building projects unique to their own cities. Though functional designations for these buildings as workmen platforms, granaries, great baths, castle, and bailey may be misleading, they do evoke the concept of civic authority. This lack of uniformity in the construction of public structures differs markedly, for example, from the restricted layout of public buildings found in other civilizations, such as in Mesopotamian temples, where a standard plan was employed in its various cities.

Suburbs: The evidence for suburban settlement is growing, and it seems likely that this was a feature of many Harappan towns and cities. Extramural architecture has been uncovered at Mohenjo-daro, Harappa, Balakot, and Kalibangan; mounds and scatters of Harappan material, including bricks, suggest that suburbs may also have existed around other settlements, including Lothal. It is likely that suburbs often developed gradually as the area inside the walls became too small to accommodate all who wished to live in the town or city. In some cases, areas of suburban development were later brought into the walled settlement by constructing additional walls: for example, mound ET at Harappa, and the successive additions of the Middle Town and the Lower Town to the walled area at Dholavira. In other cases, including Sutkagen-dor, among others, the suburban area was not walled; it probably housed those connected to but excluded from residence in the walled area. The suburbs are also likely to have been the locus for heavy industry and craft activities with noxious byproducts, such as brick making. They may also have included gardens, fields, orchards, or grazing, as has been the case in the suburbs of many cultures. In this respect, they can be viewed as a bridge between the rural and urban economy.

Rural Support Structure: Unfortunately, little attention has hitherto been paid to the village communities which may be expected to have formed the basis of the Harappan economic system, as indeed they always have in Pakistan and elsewhere in the region. Similarly, far too little is as yet known about the nomadic or semi-nomadic communities who must have then as now lived on the periphery of the settle areas, breeding cattle and other livestock, and no doubt providing transport for trade and communication. At the present moment we have no idea how much of the population was centered upon the cities and how much was dispersed through the villages. The fact that only the cities have been excavated and documented, it is clear that the study of Indus cities and towns of this period have been emphasized at the expense of the villages - which is in effect what our evidence here tends to do. It is only recently that attention has started to be paid to this important aspect of the Harappan Civilization and a coherent pattern of the village life and its interaction with the city centers would most likely develop with time. In the meantime, we have to be content with the descriptive nature of these villages as it is becoming known to us.

We do not as yet fully understand the settlement pattern of agricultural villages around the cities or the relation which an Indus city maintained with these village settlements. In fact, no deterministic criterion, excepting perhaps size, exists to classify Indus sites into ‘cities’ and ‘villages’. It is widely known that the various items of cultural equipment of the civilization like pottery, chert weights and blades, copper-bronze objects, beads, terracotta cakes, toy cart-frames, bangles and animal figurines, faience objects, and above all the seals, are marked by their presence in the smallest village as it is in the largest city. This makes it difficult to differentiate objects of the socalled ‘city’ site from those of the village site. The difference is more in the scale or quantity than in quality.

The only other apparent distinguishing feature of the city may perhaps be the planned layout and the

concept of the citadel, including fortifications. Even here, from what we know about Harappan village sites, there is characteristically an ‘acropolis’ as well as a habitation area, if only at very much smaller scale than in the urban sites. The ‘acropolis’ in the village would seem to be simply a public building set above the habitation areas. This structure, too small to be habited, must have been used to perpetuate something shared across the Harappan world. It is difficult to conceive of this as having been anything else but a religious or an ‘ideological’ symbol. In all appearances, even the smaller Harappan settlements appear to have an urban character. It is this general picture that has compelled Daniel Miller to says that there were no villages in the Indus realm.

Complicating the situation further, is the general impression that, barring Cholistan settlements, there is a dearth of village-level settlements around cities, which means that somehow larger settlements do not have a support structure of smaller villages around them as they are around the cities of other early civilizations: Haraapa and Mohenjo-daro testify to this feature. Even the unexcavated site of Ganeriwala in Cholistan, which is surrounded by a thicket of rural settlements, does seem to defy this description.The majority of the excavated sites apparently date from the early second millennium and, thus, belong to the Late- or post-Harappan period. In some sites the only traces of occupation were ashy patches of soil but containing rubbish artifacts that one would expect from city remains.

The marked absence of the village remains in the core area of the Harappan realm points to two alternative conclusions. First, these remains must have been obliterated by the vagaries of the elements, washed away by floods, or simply buried under the alluvium. Second is the possibility that permanent villages may not exist to start with. It could be that the external vagrancy of the rivers in the Indus and the Ghaggar-Hakra plains did not allow traditional villages to grow, in the way they did in Baluchistan or on the slopes of its hills. Agriculture was probably based on the cover and meander flood plains, which were changing most of the time and therefore required the spread of urban management and resources, like the present day capitalist farming, to cope with the situation.

A third explanation could be offered on the basis of subsistence alone. In protohistoric times there would have been few people in proportion to the land available, and also that protohistoric subsistence never relied solely on agriculture: it also involved the gathering of wild plants as food, fishing, pastoral production, and hunting. Thus, we can conclude that people were not irrevocably bound to particular villages. Repeated failures of rain could have impelled sedentary communities to splinter and move afar in search of hospitable environs and thereby 'disappear' from the archaeological record.

A fourth explanation is somewhat radical. It proposes that the city folks did not depend on villages for food, they produced their own food in the surrounding land. They kept their own domesticated animals and this essentially constituted their wealth. Such an explanation seems logical for smaller cities but defies logic in the case of large cities like Mohenjo-daro, Harappa and Ganweriwala. If the Harshen cities were in fact self-sufficient in food, they differ quite radically from those of Mesopotamia, where a settlement hierarchy is so vividly visible. This also opens up a new chapter in the research of socioeconomic structure the Harappan Civilization.

Social Differentiation and Stratification: Archaeologists recognize a complex society, such as that of the Bronze Age Mesopotamia, ancient Egypt, and the Harappan Civilization, and differentiate it from a “simple” society, such as the preurban cultures of the Indus Valley, through a few essential criteria. For example, in a complex society *social stratification* divides people and families into

distinct ranked groups (strata) on the basis of their wealth and status. In general the social hierarchy in the ancient civilizations of the Old World was fairly similar - the people were generally divided into 3 or 4 social classes, the nobles and priests being of the highest rank while the slaves, menial labor, and outcasts being of the lowest. The nobles and priests enjoyed higher status since they were the rulers of the country and leaders of the society. For instance in Mesoamerica, it is known that the high priests acted as advisors to the lords and nobles in the ruling of the country, in Mesopotamia they were the rulers themselves. In post-Harappan Pakistan and India, the priests were even more important than the kings as they were the only ones who could memorize and recite the magic spells of Vedas. The slaves and outcasts were placed at the bottom of the social ladder, since they were either prisoners of war, convicts, no-pay laborers, people who took on jobs that no one else wanted to do, or simply servants to the rich, the nobles, and the priests. Between the two classes lied the merchants, artisans, and agriculturists. In antiquity, the composition of this class structure varied from civilization to civilization but as a principle its existence has been an essential element for the development and sustenance of every civilization. The question of social division and stratification is therefore one of the most crucial issue in the study of socioeconomic organization of the Harappan society.

In the Harappan case, the evidence for social differentiation and hierarchical structure is not as strong as it is in may early civilizations; and whatever is available, is rather difficult to interpret. The Indus Civilization thus came to be understood, predominantly in Western academic circles, as an 'alternative paradigm' in the development and structural organization of early complex societies, apparently unlike other contemporary societies. As Shaffer summarized: “it could be that the Indus Valley, a technologically advanced, urban, literate culture was achieved without the usually associated organization based on hereditary elites, centralized political government (states, empires) and warfare” (14). This interpretation of the Indus Civilization places it in contrast to the organization of societies in contemporary Mesopotamia and Egypt, which have often been used as aids to interpreting the difficult archaeology of the Indus Civilization, with the effect of creating a dichotomous division between characteristically 'hierarchical' societies in West Asia, and the supposedly 'unstratified' Indus Civilization. Although now dated and essentially unverified, this interpretation has had a significant impact on later thinking, to the point where its fundamental propositions have become insidious and implicit notions influencing the understanding of even the most basic aspects of Indus society. A few years ago, Edward Cork examined this issue in detail (15) and, in view of the importance of the subject, we present some extracts from his thesis in the next chapter.

Material Homogeneity and Standardization: An overwhelming impression about the Harappan Civilization is that of a sophisticated and highly complex society whose hallmark is cultural as well as technological uniformity, both throughout the several centuries during which the Harappan Civilization flourished, and over the vast area it occupied. This uniformity is manifest in the Harappan material culture despite the fact that the Civilization encompasses extremely diverse ecological settings, which vary from the Cholistan Desert in the East, to the alluvial plains of the Indus, and the mountainous coast of the Makran. This impression of homogeneity results from two complementary factors: the similarity between artifacts at different sites and their predominantly plain form, which also gives an impression of primarily utilitarian concerns. This overall impression is further enhanced by the spread of a range of uniform artifacts, unique to the Harappans. These include the system of weights, the seals or sealings, various ornaments, the triangular terracotta ‘cakes’, and the classic Harappan black-on-red ware, which includes both geometric and naturalistic designs.

Further evidence for cultural uniformity is provided by a common script and the presence of proscribed urban plans. Uniformity is also noted within the size and shape of bronze tools, stone beads, ceramic forms, and even painted decorations (16). Other frequently illustrated examples of homogeneity and artifactual standardization are pottery and seals. The classic Harappan black-onred ware, which includes both geometric and naturalistic designs, is easily recognizable as a conventional style, and the particular stylistic units used. In seals also the shape appears to be heavily standardized.

There was a standardized system of weights, all sharing a single binary system of 1, 2, 4, 8, 16, 32, up to 12,800, found at about 22 Harappan sites, large and small. This spread indicates a network of supervised and controlled exchanges over the Harappan area. Prolific intercommunity exchanges, even specialist traders, would not necessarily require uniform weighing systems: for example, in Early Dynastic Sumer, weight systems differed from one city-state to another. But after political unification and administrative centralization under the Third Dynasty of Ur, a uniform system of weights was imposed throughout the realm. Although the system of measurement is less certain, the fact that the dimension of both baked and unbaked bricks generally follow the ratio of 1:2:4 suggests a shared or common standard.

Such a uniformity in artifacts was even extended to the stone tools: throughout the Indus realm the chipped stone material dominated by parallel-sided blades. The lithic industry has been studied both at factory sites, where actual working surfaces can be observed *in situ*, and from excavations at several Harappan sites. As detailed analysis of the assemblages at Allahdino and Balakot reveals a marked decrease in reworking in Harappan level. In fact the secondary working was a rarity in most of the artifact forms found in the Harappan Civilization (4).

Finally, there is an apparent common urban plan, as illustrated by those of Mohenjo-daro in Sindh and Harappa in the Punjab in particular but also in so many other sites in general.They are widely held to share a plan of a raised rectangular mud-brick podium in the West, the so-called ‘citadel’, and a lower but larger town in the East. This multiple settlement pattern has also been identified at a number of other settlements throughout the region. What is surprising, is that even the tiniest site may be trying to emulate the same pattern. Clearly, as one goes down the size of Harappan settlement the separate citadel becomes a practical impossibility, and we find Surkotada divided into two. There are some other small sites which consist of only one mound but still separating out into different classes of buildings (4). This degree of regularity is quite different from our image of the ‘peasant village‘ as distinct from the city; we get an impression that all Harappan settlements, big and small, followed the same general rule. In fact the proportion given over to separate and ‘special” areas may be quite as great in the smallest sites as in the largest. As calculated by Miller (4), the separate citadels of the largest sizes are approximately a seventh of the entire site, but at the smaller sites of Lothal and Kalibangan the citadel takes up a third of the site, and at the minute site of Surkotada the site is divided in half. It is still quite uncertain what these divisions may represent, but overall it appears to confirm the idea that the Harappan civilization has no “villages” in morphological terms (4).

As stated earlier, the uniformity of the Indus culture extends not only to the artifacts but also to the makeup of its settlements and residential architecture.The Harappan cities show remarkably little individualization of their residential houses and are hard to distinguish; in particular there is almost a complete absence of architectural decoration. In layout these houses are also relatively homogeneous, being usually based around a courtyard which cannot be entered directly from the main street but from around a corner or through another room, indicating a concern for privacy. The uniformity of

brick size and proportions has been noted at virtually every Harappan site.

The uniformity of the artifacts and the technology to make them remained intact over several centuries, experiencing only slow and imperceptible change. In Wheeler's words: "..... The Indus

citizens seem to have drawn the penalty of early success: a complacency, even selfsatisfaction, which impeded further effort. Our knowledge does not suggest any trend towards new social or aesthetic horizons" (17). Commenting on the Harappan artifacts, the Allchins echo the conclusion of most researchers when they state that "it is possible to typify each craft with a single set of examples drawn from one site alone" or, for example, that "a standard range of copper

and bronze is recorded in site after site" (16).

As one Raymod Allchin has remarked, this striking cultural homogeneity and standardization was such that one might have roamed from Kutch to northern Afghanistan via the Indus plains and found the familiar settlements of the Harappans all thriving contemporaneously wherein the pottery, bangles, seals, weights and measures, town planning, drains, graters, bath, etc., looked so familiar that it gave the allusion of a static and non-changing society. The artifacts were duplicated so precisely wherever Harappan settlement occurred that it is often difficult to speculate as to the spatial origin of any particular artifact or place or time period when it must have been fabricated. This state of affairs - the expansive uniformity, the 'competent dullness', the extant 'sameness' over time - coupled with the apparent segregation of production areas for different products, bears upon the question of the social and political organization of the Harappan society and has fueled the current debate on the political nature of the Indus cities.

Coupled with the apparent uniformity in production was the widely dispersed uniformity of consumption. Even at small sites, such as Allahdino, which are so small that they could not possibly have supported such a range of manufactured goods, there is no noticeable absence of any of the common artifact types, so that there must have been an effective internal trading network which supplied such sites. This latter has been emphasized by Fentress as having been a major means of ironing out local and differential access to resources (13,18).

It is possible that the uniformity of Harappan objects has been generally overemphasized and the diversity which exists in other spheres generally ignored. For example, Fentress (13,20) has pointed to a manifest diversity in material of house construction as well as the artifacts found therein. On that basis, she has vigorously challenged the general impression of homogeneity in the Indus culture and some of this criticism indeed seems to be valid. Miller (4), nevertheless, finds Fentress' conclusions wanting. First, the assertion of homogeneity is always dependent upon the level of analysis. Artifacts which are the same in terms of centimeters may be highly variable at the level of millimeters. As modern techniques have become more sophisticated they are bound to reveal a degree of diversity. Second, Fentress' aim was to critique the conventional interpretation of homogeneity as "normative" and to exemplify the concern for variability advocated by the "new archaeology". There is therefore a clear bias toward the assertion of variation in contrast to the earlier attempts to deny it. The problem is how to interpret the degree of variability she reveals. Commenting on this study, Miller (4) observes: "I would assert that in all five artifact classes examined, it is the overall similarity between the two sites [i.e., Mohenjo-daro and Harappa) which is striking".

Almost all the relevant examples of diversity available to us are from the peripheries rather than from

the core of the civilization. For instance, the cases of cultural differentiation in Kutch and Saurashtra, Kuli region, and Zhob and Quetta valleys can be quoted. Judging from their material culture, the people of Kutch and Saurashtra do seem to be different from those of the core areas of the Indus Civilization: this comes through as not just different kinds of pots and other artifacts, but in terms of subsistence, adaptation, and ways of life. Similarly, the Kulli people of South Baluchistan and those of Zhob and Quetta/Pishin Valley of northern Baluchistan stand out in contrast to the Harappans of the riverine plains. They seem not only to be somewhat different from the core area but also from each other. We also see some variations in material culture in the IndoGangetic Divide but these cultural remains, along with those of Kutch and Saurashtra, are of Late Harappan or even post-Harappan period rather than of the Mature Harappan period. Thus, looked from this venue, some degree of regional variation in ceramics does exist but these variations stem from being outside the time frame of the Harappan Civilization and from being at the periphery of the Indus region.

Thus, notwithstanding the limited regional variation that can be discerned in some of the artifacts, the Harappan Civilization was quite uniform over a large span of time and space, its technological base was rather slow to change, slow to the extent that ‘culturtal stagnation’ readily comes to one’s mind, its ceramics indeed reflected a picture of ’competent dullness’, its architecture only varying in the use of raw material dictated by its availability alone, and its social structure probably fossilized into a state of ‘eternal bliss’. This state of affairs - the expansive uniformity, the ‘competent dullness’, the extent ‘sameness’ over time - coupled with the apparent segregation of production areas for different products, bears upon the question of the social and political organization of the Harappan society and has fueled the debate on the political nature of the Indus cities.

Finally, we must mention that apart from the question of apparent homogeneity in artifactual remains, settlement pattern, and housing construction, one should not ignore a possible heterogeneity in other aspects of Harappan life, including such fundamental matters as religion and subsistence. It owes much to the diversity of cultural backgrounds from which its people sprang. In the centuries before the emergence of the civilization, these included indigenous huntergatherers and fishers, farmers and pastoralists of local stock, and others whose ancestors came from Baluchistan and the Indo-Iranian borderlands, as well as those who still had their homes in the latter region. Differences in artifacts and the abstract, small as they may be, could still be significant enough as to affect our assessment of the social and political organization of the Harappan society.

A Purported Guiding Hand to Ensure Uniformity: The uniformity of cultural markers, such as the crafts of various kinds, has a strong bearing on organization of the industry, the procurement of raw material, and above all the mechanism for achieving such a uniformity over such a vast area. In this connection, the main analytical framework for Harappan material culture was established by Piggott, who chose to emphasize the uniformity in style and technology definable among such objects as ceramics, metal tools, seals and weights. According to Piggott such uniformity correlates with ". . . a monotonous regularity of a highly organized community under some strong system of centralized government, controlling production and distribution and no doubt levying a system of tolls and customs throughout the territory under its rule" (21).

This, however, does not seem to be the case (4). Extensive work at Mohenjo-daro, which includes a large scale surface survey, suggests that, while most of the familiar commodities were produced on the site, the nature of this production was generally dispersed (22,23). Depending upon the product, there is evidence for a variety of workshops and for considerable manufacturing activity taking place

within the ordinary houses of the residential sectors. There is no evidence for a factory-style system of centralized production (4). This type of manufacture at Mohenjo-daro may be matched by the evidence from other areas. Even comparatively small sites such as Lothal and Chanhu-daro appear to provide evidence for the local manufacture of a large proportion of the typical artifacts. Such a decentralized form of production suggests that the homogeneity is not a product of the direct centralized control.

Piggott felt that such uniformity reflected a conservative attitude toward culture change, one reflected in the Harappan culture to such a degree that he felt it had entered a stage of cultural stagnation.This interpretation of Harappan material culture is somewhat reflected in all subsequent summaries on the civilization and this was in the past at the root of influential and longlasting interpretations of Harappan society. We shall come back to this model in the next few chapters in some details.

Comparative Approaches and the Indus Civilization: The difficulties in interpreting the archaeological record of the Indus Civilization, in contrast to other contemporary societies, has led to the latter (primarily Mesopotamia) having been used as a benchmark in the interpretation of the former. The use of implicit comparison is therefore quite common in interpretations of the Indus. Explicit comparisons have also been frequent, although seldom structured beyond mere observations of similarities and dissimilarities between various parts of the archaeological record. Most commonly, archaeologists have looked either to Mesopotamia or Hinduism (when dealing with Indus religion), although Piggott (21) was somewhat indiscriminate in his inclusion of Egypt, Rome and Mesoamerica.

As Possehl (24) rightly points out, many of these comparisons (especially earlier ones) cannot be considered as rigorous or well-reasoned, and many employ uncritically Mesopotamian concepts and data. Comparisons drawn between the Indus and Mesopotamia pepper the earliest excavation reports, particularly in the work of Mackay, who had previously excavated in Iraq. Significantly, he made a number of comments (such as the relative fragility and inefficiency of copper weaponry compared to Mesopotamia) that both had a profound effect on later thinking, and set the precedent for viewing contemporary societies further west as a benchmark by which the Indus was somehow supposed to be measured - and usually found wanting.

This viewpoint is particularly evident in the work of Piggott, Wheeler and Gordon. Piggott and Gordon in particular are quite negative in their discussions of Indus culture, and all three share a diffusionist approach that strongly directs their use of comparative material. Piggott (21) makes liberal and unqualified use of comparisons and analogy in his discussion of Indus Civilization. References are made to Sumer, Akkad, Egypt, Rome, Mesoamerica and modern Hinduism; seemingly wherever a parallel is found, and with no consideration of context. The 'granaries' and street plans are likened to those of ancient Rome, and Harappa's 'coolie lines' to buildings at Tel elAmarra. Religious elements with parallels in later Hindu practices are noted in a reworking of Marshall's original essay on Indus religion (25). Less frequently, but more significantly, Piggott makes value-judgments based on a comparison with another society, such as his claim that the Indus embodied 'the worst of Rome' in its apparent cultural uniformity, or that it was technologically inferior to Sumer and Egypt, and comparable with Pre-Columbian Mesoamerica. Gordon (26) does not attempt formal comparisons, but it is once again clear that assumptions based upon informal comparison are guiding Gordon: most 'innovation' is therefore held to have diffused from Sumer and Elam, including urbanism, technology and even bitumen. When this stream of new ideas stopped, Indus culture slowly stagnated

and fell apart. Wheeler is, of course, famous for his attempt to move beyond a purely diffusionist explanation of the origins of Indus culture, stating that only 'the idea of civilization' need have been borrowed from West Asian societies (27). This, unsurprisingly, has not proved any more popular an interpretation than Piggott or Gordon's. Wheeler also uses comparisons with Mesopotamian data to suggest the inferiority of Indus weaponry (27).

This tradition of attributing the arrival of 'civilization' in the subcontinent to diffusion from the West has had an understandable and profound impact upon South Asian scholars' attitude towards discussions of Mesopotamia and Mesopotamian data. Some writers overtly criticize the position, but most simply make very little mention of Mesopotamia in their treatments of the Indus, and certainly do not use it as an interpretative tool with which to better understand the Indus. Chakrabarti (28) makes no mention of Mesopotamian influence or data, stating that the Indus has to be 'understood in its own terms' (28), and drawing the occasional parallels to early historic India and modern Hindu practice. In a similar manner, Gupta (29) denies any influence on the Indus by Mesopotamia, only mentioning the latter in a discussion of trade routes, and Lal (30) has produced a book which sets about identifying stylistic links between Indus and modern Hindu material culture. Dhavalikar (31) and Agrawal (32) only mention Mesopotamia in the context of external trade, but Lal (33) adds to this the suggestion that Indus weaponry appears underdeveloped in comparison to that in Mesopotamia. In contrast, Ratnagar has made significant use of Mesopotamian data as an interpretive device; but in general it appears an uncommon practice amongst archaeologists from South Asia.

The most significant formal comparisons recently made by Indus scholars have been attempted by Ratnagar, Kenoyer and Parpola. Ratnagar (34) compares proposed palaces at Mohenjo-daro with those in various Mesopotamian cities. The reasoning behind this approach is clear: palaces, or buildings performing palatial functions, conforming to conventional understanding generated by predominantly Mesopotamian and Egyptian examples are seemingly absent from the Indus. Ratnagar's methodology tested this position by comparing an attribute of Mesopotamian palaces also measurable for Indus architecture: building size. Although excessively large size is not necessarily a feature of all palaces (a point Ratnagar acknowledges), the study is notable for its approach; it essentially tests a statement made of a society by comparing the archaeological data used in support of that statement, rather than remaining at the level of statements and interpretations.

Kenoyer's interests and methodology are far broader, using the evidence from later early historic states in India to tackle the issue of Indus statehood. In a sense, he is using the comparative method to test a statement (that the Indus was not a state-level society), by comparing it with later societies which are generally agreed to have been such. However, the analysis is not so formally structured as Ratnagar's, which examines a far narrower and more tightly defined statement, and which makes explicit use of specific and quantified archaeological data. Parpola's use of the comparative method lies in his desire to better understand the iconography of Indus stamp seals. His approach is primarily analogical, drawing attention to stylistic similarities between Indus iconography and that of societies further west (35,36) or later Hindu culture (35). As such, Parpola's approach is limited to suggested interpretations of the iconography, based on stylistically similar material from elsewhere.

Harappan versus Mesopotamian: For some time now there has been a tendency to describe the Harappan material culture as well as the sociopolitical constructs of the Harappan Civilization in the idiom of Mesopotamia. The interpretational aspects of Harappan-versusMesopotamia form the core of the next chapter; here we list a few points to round off tthe present discussion.

A fundamental contrast between the Mesopotamian and Harappan situation is in matters of scale. The occupied area of the alluvium between the Tigris and Euphrates in about the middle of the third millennium - when Harappan Civilization entered its urban stage - was around 65,000 square kilometers, while the cultivated valley of the Nile, at 34,440 square kilometers, amounts to only half that. By contrast, the Indus Civilization extended roughly 1,000 kilometers north to south and east to west, covering an area of around 1,000,000 square kilometers. This is nearly twenty times the area of Egypt, and over ten times the settled area of Egypt and Mesopotamia combined.

Another contrast of a fundamental nature is the nature of the relationship of the cities with the rural areas. A common pattern in early cities of Mesopotamia was a mutual dependency between rural and urban dwellers. No such dependency is, however, evident in case of the Harappans.

Allchin and Allchin (34) report population estimates for Mohenjodaro and Harappa of around 30,000 and 40,000, respectively, which is in the same order of magnitude as Mesopotamian cities. The difference, however, lies in the sheer number of Mesopotamian cities, which on the southern alluvium could even be in sight of one another, in turn reflecting fundamental differences in the relationships between centers and hinterland. The consequence is a different level and type of urbanization, as between Sumer and Harappa, with nearly double the percentage (78 per cent) of the Sumerian population living in settlements above 40 hectares as the Harappan (44 per cent). Accordingly, Sumer was a society of city-states whose populations had a strong civic consciousness. Harappan society consisted of an extensive oecumene or commonwealth, with a largely village-based population which the cities helped to integrate economically and culturally.

These cities were spaced fairly evenly throughout the Harappan realm and were separated from each other by 280 to 600 kilometers. It is interesting to compare this arrangement with that in Sumer where the cities were far more numerous and were situated only about 20-60 kilometers apart, distributed lineally since they were confined to the narrow floodplain of the Euphrates.

The question of War and Peace or 'Coercion' versus 'Consensus': The question of war and peace and the issue of coercion or consensus in the Harappan society is theoretically discussed on two levels. First, war is believed to be one of the primary movers for the formation of state. It is through armed struggle that one chiefdom conquers the other and through this process states and empires emerge. Second, there is a commonsense belief that people do not obey rules and regulations automatically; they often seek to escape obligations or try to interpret the rules to their own advantage. As a consequence, society must have mechanism to cope with deviant behavior. If there is no war, there is no state. Similarly, if there is no coercive force, there is no law and order. There is also a third element: if the Harappan society was politically organized as city-states, then these micro-states must engage

"The main foundations of every state new states as well as ancient or composite ones are good laws and good arms. You cannot have good laws without good arms

and where there are good arms good laws inevitably follow."
Niccolo Machiavelli, The Prince

in occasional, if not perpetual, conflicts between neighbors, as the city-states of Mesopotamia and many other early civilizations apparently did. Contrary to these theoretical considerations, however,

we fail to observe any sign of war and coercion. This has generated much controversy and the debate still goes on. Are our archaeological interpretations faulty? Or, is the Harappan Civilization unique?

Warfare as the necessary component for the formation of state received a widespread currency in archaeological and anthropological circles during the better part of the last century. In fact, the very definition of the state for sociologists like Max Weber depended on warfare and the monopoly of force. Weber (1921), for example defined the state as the organization that has a "monopoly on the legitimate use of physical force within a given territory." Contemporary theories on the origin of state, also give a decisive role to warfare. Carniero (37), for example, developed a classic argument that coercion is basic to state formation, and gives an account of its long history. Military victory of one society over another is common in early civilizations. If the winner of a military conflict can permanently control the defeated, they can set themselves up as a hereditary, exploitative elite. Since no independent community would willingly place itself under an overlord, it must be subjugated by force or a threat of force. According to Carneiro: “there is little question that, in one way or another, war played a decisive role in the rise of the state. Historical or archeological evidence of war is found in the early stages of state formation in Mesopotamia, Egypt, India, China, Japan, Greece, Rome, northern Europe, Central Africa, Polynesia, Middle America, Peru, and Colombia, to name only the most prominent examples.” Also: “....it was the individuals who had distinguished themselves in war and who were generally appointed to political office and assigned the task of carrying out this administration. Besides maintaining law and order and collecting taxes, the functions of this burgeoning class of administrators included mobilizing labor for building irrigation works, roads, fortresses, palaces, and temples. Thus, their functions helped to weld an assorted collection of petty states into a single integrated and centralized political unit. These same individuals, who owed their improved social position to their exploits in war, became, along with the ruler and his kinsmen, the nucleus of an upper class. A lower class in turn emerged from the prisoners taken in war and employed as servants and slaves by their captors. In this manner did war contribute to the rise of social classes" (37).

Bruce Trigger is another strong advocate of violence in the formation of state. He agrees with Carneiro in that societies simply do not surrender their sovereignties voluntarily. It takes force, either the outright application or the threat of it, to overcome individual autonomies and weld smaller political units into larger ones. According to him (38), military force played three important roles in early civilizations, which he studied (the Harappan Civilization not one of them). It secured and defended the frontiers of state; it enriched powerful rulers by enabling them to exploit peripheral areas that contained valuable natural resources, control lucrative trade routes, and impose tribute on conquered peoples; and it maintained internal order - suppressing rebellions, ensuring the collection of taxes, maintaining social peace, and protecting the power and privileges of the upper classes. No clear distinction was drawn between military and police force.

Cohen (39), paints the role of coercion and war with even bolder strokes: “War helps make states, states make war, and therefore states are in part, and must always be, war machines”. He takes clue from his studies of northern Nigeria and notes: “.... the warfare capability of the early state helped spread statehood to surrounding non-state societies”. There have been several other proponents of force or the threat of force in the formation or the maintenance of state. History and archaeology give ample evidence that the use of force has been one of the key elements in the process of state formation. For example, the early Mesopotamian city-states based apparently on a religious elite soon gave way to ones dominated by military aristocrats, although, of course, the religious center of

power remained. Cities became fortified, and strong cities began to attempt multi-city empires. Very commonly, barbarian warlords either created states of their own or inserted themselves as the elite of existing ones, especially on the interface regions of pastoral societies with agricultural areas.

War helps make states, states make war, and therefore states are in part, and must always be, war machines. *Cohen, R. Origins of the State: the Anthropology of Political Evolution, 1978*

Given its importance, documentation of warfare is surprisingly limited, sporadic, and equivocal for most early civilizations (38). Archaeological evidence of warfare sometimes occurs as city walls or frontier fortifications, but city walls were not just for protection against foreign attack. The nature and quantity of weapons recovered from early cities and towns is another indication for the relative intensity and frequency of warfare.

The warfare and coercion as necessary component in the formation of state has two alternative implications. First, if we insist on the Harappan Civilization as state, then we must show that the Harappan society did have the provision of use of force or at least a threat of use of force. Second, if we subscribe to the notion that the Harappan society did not, in fact, have any component of use of force, then we must conclude that a Harappan state could not possibly exist. Both sides of the argument has been vigorously debated in archaeological circles and this acrimony still continues. There is, of course, a third alternative: the Harappan was a state level society but it was unique in the respect that it was devoid of violent coercion: the so-called 'alternative paradigm' discussed in the next chapter.

Carneino is not the only advocate of violence in the formation of state. There were several others. All these thoughts fall under *coercive* or *conflict* theories, discussed in some details in Chapter I.1. These theories, including that of Carneiro, are not universally accepted, and there are other theories, collectively called *integrative* or *functionalist* theories, that do not give such a central place to warfare. These opinions suggest that complexity, stratification and the state arose not out of the ambitions of individuals or subgroups, but out of the needs of society. At some point in their history, certain peoples spontaneously, rationally, and voluntarily gave up their individual sovereignties and united with other communities to form a larger political unit deserving to be called a state. V. Gordon Childe (40), for example, argued that out of the occupational specialization there developed a political integration which united a number of previously independent communities into a state.

Webster (41) believes that violence was lacking in early states, and the survey of ethnohistorically documented early states revealed that. Claessen (42) tells us that warfare and conquest once played an important role in his theory of state formation, but now “it seems improbable that war should be considered the, or even a, prime mover behind the evolution of sociopolitical forms”. Thompson (43) contends that any intergroup violence was evidently so infrequent and of such low intensity that no one’s fighting skills and resources ever arose within reach of the ability to commit full-scale urban plunder, therefore intercity defenses were not needed. He sites several factors in favor of this position. As a consequence of this position, one can also say that the state needed only very minimal force to subdue anyone who would not comply. Thompson also attacks the coercive group from a theoretical, although radical, point of view. He proposes that the Harappans were not a state-level society and the existence of state during the Harappan Civilization was disputable. It was a stateless society, there could not be a theoretical compulsion to assign to it a coercive force for its functioning.

Now coming to the Harappan context specifically, ever since the Marshall’s first report on the

excavations at Mohenjo-daro, it has been an article of faith among archaeologists that the Harappans were a peaceful people and their social and political structure was a non-coercive, cooperative, enterprise. One points out to the archaeological evidence which largely indicates an absence of weapons in the Harappan remains. Even if they did, they were so flimsy that they could not be believed of any help. No other overt evidence of warfare, offensive or defensive, has also been found in the archaeological remains. The townwalls, which were once believed to be defensive walls, turned out to be merely city parameter walls. The burning of some Early Harappan settlements in Sindh and Baluchistan seems to be self-inflicted. All in all, the Harappan Civilization seems to be *A Peaceful Realm*, as the title of one of McIntosh's books on the Indus Civilization indicates (44).

That the Harappan Civilization might have been a land without conflict is one of its most surprising aspects. A comparison with other civilizations shows how unusual and unexpected this is. For example, the texts of contemporary southern Mesopotamia are full of references to warfare, and there are numerous depictions of soldiers and battles. These civilizations often had periods of peace and strong government, but these were usually interspersed with fighting between rival groups.The early civilizations of Mesoamerica were largely based on violence, sometimes extreme.

There are two types of archaeological evidence for or against the nonviolent nature of the Harappan society: the weapons and the defensive walls. The nature of the Harappan weaponry plays a predominant role in this debate. These weapons (or utilitarian implements) have been discussed in some details in Volume III (*The Material Culture*) of this series: here we review the evidence again.

From the time of the discovery of the Indus Civilization, Indus weaponry has been portrayed as technologically inadequate for offensive use, inferior to Mesopotamian examples and outnumbered by tools at Indus sites.Technologically, Harappan weaponry is relatively very simple and rather limited in variety. The bulk of Harappan axes are of essentially the same unsocketed design, and almost all arrows found are swallowtailed and un-tanged. The blades are technologically almost identical: none have a midrib (although some have slight median thickening), and all have a short, flat tang. The only significant variation lies in the curve of the shoulders and cutting edge, yielding blades varying from leaf shapes to narrow, angular shapes; it is unclear whether this reflects deliberate imposition of form or the effects of re-sharpening. This is in apparent contrast to the Near East, where axes took on a large number of forms including such specialized types as fenestrated axes, and where blades were tanged, un-tanged, riveted or socketed. Swords only appeared relatively late in the Near East, and therefore no reason to suppose that the lack of swords in the Indus Civilization reflects an absence of hand-to-hand combat.

The ineffectiveness and scarcity of weapons was first commented on by Mackay, who observed that the copper blades found at Mohenjodaro would 'double up upon impact', and linked this specifically to an absence of coercion and warfare: "......judging from the small number of weapons of offense and defense, the people of Mohenjo-daro appear neither to have been a warlike people nor have feared invasion". This statement has been repeated, often word for word, by Wheeler, Agrawal, Rao, Basham, Kosambi, and many others. Metallurgical analyses have also downplayed the significance of weaponry: Sana Ullah and Rao claimed that the use of tin bronze was restricted to tools, jewelry and vessels. In one of the recent treatments of the topic, Maisels states that "there is no evidence for armies, either in terms of imagery or equipment" (45), and McIntosh suggests that Indus weaponry such as arrows and daggers could have as easily served as hunting implements (44,46).

The ineffectiveness of the Harappan weapons have, however, been contested by some scholars, the most prominent of them being Edward Cork (47). He argues that none of the above mentioned statements against coercion and warfare has been tested, or given critical consideration. In particular, the almost verbatim repetition of Mackay's original comment regarding the thinness of blades suggests that it was simply received wisdom. He believes that the absence of warfare in the Indus Civilization suggested by many researchers is based upon problematic evidence, an uncritical acceptance of past interpretations and comparisons made with Near Eastern data which fail to distinguish between the funerary contexts from which most Mesopotamian metalwork derives and the domestic contexts from which most Harappan metalwork originates.

Unsocketed Harappan axes are seen to be technologically inferior to their socketed Mesopotamian counterparts. However, unsocketed axes were evidently used in military contexts in Mesopotamia alongside more complex designs. It has been observed that in the 'A' cemetery at Kish (Early Dynastic period), solid axes are placed in the same locations, with respect to the body, as socketed axes, suggesting the two designs were understood as performing the same functions. In Egypt, battle axes remained unsocketed until the Iron Age, and were fastened to the shaft by cords or tangs. Technologically, these Egyptian examples are no more advanced than the flat axes of the Indus Civilization. Clearly, flat axes were used as weapons in Egypt and Mesopotamia during the Third Millennium, leaving no reason to suppose that those from the Indus were not.

The exact function of Harappan blades is uncertain, but they closely match types of daggers from the Near East. These ancient Near Eastern blades have a thickness consistent with the Indus examples, but is not suggested that they were too fragile for practical use, or that they were restricted to domestic (nonviolent) uses. In Egypt, metal daggers only became common from the Middle Kingdom onwards (*ca.* 1940 BC) and were of simple design (also technologically similar to Indus designs), with short tangs and rivet holes for fastening the handle. Harappan axes and blades conform to broad types found throughout the Near East and Egypt. They represent forms that, whilst technologically less developed, can still be interpreted as weapons and could have been used alongside more complex designs. Harappan arrowheads have no comparison in Egyptian or Near Eastern metal assemblages, but although they are criticized as being technologically primitive, there is no reason to suppose that they were not effective.

The most common metal used by the Harappans was unalloyed copper. What little tin alloying exists appears predominantly in tools; the typically unalloyed weapons consequently are interpreted as less important in terms of function, aesthetics or status. However, tin bronzes are also scarce in Third Millennium Mesopotamia, and the majority derive from the high-status funerary contexts of the Royal Cemetery at Ur and 'A' cemetery at Kish. It has been suggested that tin was at this time a highly valuable commodity, associated by common geographic origin with lapis and gold. Furthermore, no link has been confirmed between tin alloying and artifact type in Mesopotamia or in the Indus Valley despite assumptions that tin alloying predominated in items that would have benefited from its mechanical advantages. The perceived inadequacy of Harappan weaponry due to its low tin content is therefore misplacedand.

On the basis of the above arguments, Cork concludes (47) that Harappan weapons cannot be viewed as technologically inferior or inadequate for combat.The effectiveness of Egyptian weapons, despite the slow adoption of more advanced designs, further refutes the suggestion that the technological conservatism seen in Harappan weaponry indicates the absence of the means of armed coercion.

Since the bulk of complex Mesopotamian weapons (and weapons in general) derive from burial and votive deposits, they cannot be compared with those found in the houses and streets of the Harappan sites. Items from the deliberately structured deposits in graves clearly do not reflect social reality, and are not comparable with Harappan weapons, which derive exclusively from domestic contexts.

Most significant to the ‘peaceful Harappans’ model is the claim that weapons are scarce at Indus sites, and the overall number of weapons lower than at Mesopotamian sites. In order to test this assumption, Cork compared (47) the metal assemblages from the Indus sites of Mohenjodaro, Harappa, Chanhu-daro, Lothal, and Surkotada with those from residential areas at Ur, Nippur, and Tell Brak. He concluded that the claim that weapons are less numerous in the Indus can be rejected outright. Secondly, the proportion of the assemblages composed of ‘tool/weapons’ is often *greater* at Indus sites than at Near Eastern sites.

The absence of more complex technological forms and especially of weapons made with precious metals and stones may suggest that the Harappan elite did not use weapons as symbols of power to differentiate themselves from the nonelite population in the same way that Mesopotamian elites did. It does not necessarily follow, however, that the Harappan elite did not use weapons, or use warfare as a method of social control, or for political and/or territorial gain, or that the nature and function of elite power did not involve these weapons. The tendency for Mesopotamian weapons to derive from funerary contexts creates another major difficulty in comparison. The message conveyed by burials, as public displays, will conform to the ideology and worldview of the survivors. This may include the deliberate manipulation and misrepresentation of social reality. By the same token, it can be argued that a pervasive assumption, bordering to an academic dogma, about the necessity of warfare for the justification of a society’s status as state, has equally colored our judgment about the archaeological evidence.

The walls surrounding the ‘citadel’ mounds at Mohenjo-daro, Harappa, and several other sites were originally thought as the defensive walls but gradually they have has been connected with ritual and public use rather than defensive. The perceived absence of weapons was compensated by stressing the fortified nature of the ‘citadels’ by the proponents of conflict theorists but in somewhat lukewarm fashion. For example: “As is at present known, fortifications at the two major cities are confined to the citadels; it is not apparent that the lower city was in either case fenced. This in itself suggested that the function of the armed citadel might have been as much the affirmation of domestic authority or as a safeguard against external aggression.” This is arguably influenced by the acceptance of a nonviolent Harappan society. The interpretation of the Harappan Civilization as below state level (the presence of warfare being assumed to be a common criterion for state level society), and the discussion of increasing societal complexity in terms of material culture spread (rather than the processes behind that spread) are further examples of this belief. The fact that scholars who have expressed reservations about an absence of warfare (e.g. Kenoyer, Possehl, and Ratnagar) still discuss other aspects of this civilization in a manner that excludes warfare as a motivating factor or concern, demonstrates the enduring influence of the peaceful model of the Harappan society.

The comparison with Mesopotamia looms large when discussing the presence or absence of warfare in the Indus Valley during the Harappan Civilization. One should take note of a fundamental difference between the two. The inhabitants of prosperous Mesopotamia were perpetually on the defensive against the mobile peoples of the desert and mountain regions that bordered their lands; the control of vital canal water for irrigation was a common source of friction between cities within

Sumer and Akkad; and they were often competing with powerful neighbors, the state of Elam, and later others. Comparable problems were experienced by the Chinese, beset by Central Asian nomads; by the Greek city-states competing for control of limited land and other resources; and similarly by others. The Harappans, in contrast, were descended from the pastoral nomads of the mountain massif on their west and maintained good, probably kin-based, relations with them, even though the inhabitants of the northern part of Baluchistan were not under Harappan political control and those of the Kulli culture in southern Baluchistan only loosely so. The presence of these well-disposed highland cultures on their border provided a buffer between the Harappans and their nearest civilized neighbors, the Helmand culture.

Within the Harappan realm, the diversity of resources and economic potential of the different regions and the great productivity of its lands and relatively low population meant that there was no spur to conflict and considerable benefits to be gained from cooperation among the inhabitants of the different regions. Population density in neighboring regions was even lower, and the benefits of peaceful cooperation even greater.

Notwithstanding the arguments for a peaceful real, many scholars have come to the conclusion that the Harappan society was rife with the forces of coercion, even low-level conflicts. If it was a state-level society, then it must have groupconflicts and wars. Ratnagar, for example, has provided archaeological arguments to the wellaccepted theoretical relationship of state with violence, and came up clearly against the pacifist nature of the Harappan state: “Metal weapons like arrowheads, axes and spearheads are not particularly sophisticated forms, as compared to counterparts in contemporary Iran and Mesopotamia. But there were stone mace heads for close combat, as well as missiles of baked clay. Even if all the weaponry was of an inferior standard as a whole, this still does not rule out Harappan efficiency in warfare: much would depend on discipline, speed of recruitment and movement, and the efficiency of command and compliance. Nor should we expect a professional or standing army, and the barracks that go with such an institution. All Bronze Age rulers would have been 'priest kings' in the sense that they exercised power from within the trappings of religious authority, but this does not mean that religion was a source of power: a ruler must enforce his decisions by the threat of use of force or, if necessary, by its actual use”, writes Ratnagar (34).

The absence of evidence for actual battles is problematic because they are such a rare archaeological phenomenon. Possehl has drawn attention to the apparent burning of a number of Harappan sites at the beginning of the Mature Harappan period, which might be interpreted as territorial expansion by a specific group. The claimed unsuitability of walls and gates is somewhat subjective, and ignores sites with bastions and ‘double-axis’ gateways. More significantly, our knowledge of warfare in Egypt and Mesopotamia is heavily dependent on textual evidence and art; but this simply does not exist to portray any aspect of life in the Indus Civilization.

There is also an argument based on the mechanism of expansion of the Indus Civilization through conquest. One plausible explanation for the rapid spread of the Harappan Civilization and the authority of the state is conquest. We may imagine that the state in the core area which initially possessed these features subjugated the other regions, one after the other. As they conquered, the victors not only built towns suited to their own vision, but also imposed their own requirements with regard to consumption of goods and luxuries. An ‘Indus empire’ could thus have been created. For this to happen, however, the original Indus state needed to have the armed means to both conquer and keep in subjugation a large population within its area of influence.

Kenoyer (48) notes the absence of any depiction of warfare or captive taking on Harappan tablets or represented through any other form of visual art but does not take it as an evidence for the actual absence of human conflict in the Harappan society. Instead, “The absence of images depicting human conflict, however, cannot be taken to indicate a utopian society in which everyone worked together without warfare. We have to assume that there were periodic struggles for control and conflicts within a city as well as between cities. These battles and political confrontations may have been illustrated in other ways that are not preserved in the archaeological record”. The absence of artistic or textual reference to war in the Indus is therefore no more representative of a lack of war than a lack of trade, agriculture or urbanization – none of which are in any doubt.

A second level on which the use of force is generally discussed in context with early civilizations is what we may call in modern days as policing. Every society has norms and values according to which people are supposed to behave. This is true even though people do not obey rules and regulations automatically. They often seek to escape obligations, or try to interpret the rules to their own advantage. As a consequence, most societies have mechanisms to cope with deviant behavior. In hunter-gatherer societies, such mechanisms are usually very limited; when efforts to mediate have no success, one of the contending parties leaves the band. In more complex societies, disputes are sometimes solved by negotiation. Another method of dispute settlement is adjudication wherein a binding decision is given by a third party, such as the king or a functionary of the state who has some degree of authority. Such a decision is in some way coercive in that the adjudicator has not only both the right and the obligation to reach and enunciate a decision but also the power to enforce it. Such enforcement may vary from agreement by the audience to the support of an armed force. Thus, in a complex society the keeping of order ultimately rests on the use of force or a threat of it. The role of religion and ‘ideology’ cannot be denied but this role is rather hazy and often transitory. Trade is certainly a powerful instrument of control but it is doubtful that the Bronze Age society of Harappan Civilization was sophisticated enough as to make the use of this tool effective. On theoretical ground, therefore, coercion is essential to keep order and maintain social norms.

The central point of the argument is that the sociopolitical system of any state-level society squarely rests on the use of coercive force. This argument is more clearly and succinctly stated by Maxist theoreticians: since an elite group substantially controls the means and relations of production and since it is the elite whose interests are of paramount importance, to maintain such a relationship one needs to use or wield the threat to use of force.

“.....history's typical ruler [is] a "stationary bandit" prone to invest in public goods in order to maximize his own revenues and thus a benefactor to those he robs.
Mancur Olson, in *Power and Prosperity: Outgrowing*

This idea of the state monopoly on violence has been a longaccepted attribute of all state-level political organizations (49). The idea probably arose on the assumption that few, if any, "public goods,"

including basic "law and order," have been privately produced anywhere, anytime. This notion is understandable because the only well-known case of a long-lived, non-primitive, stateless society has been medieval Iceland (50). Yoffee (51), however, sees the state exercising not a monopoly of using force but a "paramount control" of law and force in a system incorporating numerous semi-independent subsystems”. Similarly, Claessen (52) states that “the maintenance of law and order seems

to have been based for the greater part on authority, and much less on force [in early states]. In only eight cases [of 21] was some form of police force found.” The question then arioses: what is the basis of authority and how dies it come into being?

In the absence of the use of monopolized force, other means of coercion have been proposed and some scholars have attempted to explain coercion in context of the Harappan Civilization in terms of ideology and religious sanctions. For example, Malik (53) explained the power structure in terms of ‘discipline, enforced by a ‘superstructure of values’. Daniel Miller (4) proposed that those in power were ‘conspicuous through asceticism’ and not the monopolization of force, whilst Kenoyer (48) discussed ‘coercion through trade and religion’, and Ratnagar (34) pointed to the monopoly of trade as a vehicle of social and political control. Service (54) points out that: “ ... reinforcement by supernatural means was not only characteristic of the early civilizations, but sufficiently effective largely by itself." All these entail the non-utilization of physical force as an instrument of state.

Police power is a difficult attribute to trace archaeologically in the absence of documentary evidence. Only one tangible clue and one ephemeral one are provided in the remains of Harappan Civilization that faintly suggest the employment of what may have been an organized constabulary. This palpable evidence comes from Mohenjo-daro in the form of what Wheeler (55) has interpreted as guard rooms for night watchmen "placed mostly on corner sites with their doors in important thoroughfares .... ". Less tangible indication of a possible early police force appears in the Indus script: the sign showing a human figure carrying vertically a long slender staff of a height almost equalling that of the carrier. Fairservis (56) reads this symbol alternatively as an overseer or smith. Not to be ignored, however, is the resemblance of the script sign to the traditional *chaukidar* or watchman who still makes his rounds in Pakistani and Indian villages, carrying a steel-weighted *danda*, or staff, or with the *thanaidar*, or state trooper, whose primary riot-control device remains the *lathi*, a long, slender but effective bamboo pole (57).

Political Organization: The issue of the political structure of the Harappan society is the topic of the next three chapters. Here we briefly touch upon a few points to round off the discussion at hand.

According to the currently popular theory of state formation, most civilizations go through various stages of growth from the family to the local groups to collective fiefdoms, chiefdoms, citystates and on to territorial states, even empires. It is likely that the Harappan Civilization too went through these stages. However, it is not clear how and when. The exact level of the civilizational complexity and its transformation from autonomous villages to the state structure is not understood. It is not even clear if the Harappan society indeed reached the social structure of a state or if it essentially remained a stateless entity (58).

Interpretations concerning the political organization of the Harappan civilization vary widely because, theoretical viewpoints aside, proportionately little of the civilization has been horizontally excavated, and its script is limited in occurrence and has not been deciphered. Regarding the first point, barely a dozen of the known sites with Mature Harappan ceramics have undergone excavation beyond test soundings, and of these, only two or three village-size settlements have been uncovered. Furthermore, some of the major excavations were undertaken before the realization that data such as bone counts, ceramic frequencies, sediment studies, or lithic analysis could reveal significant information on ancient cultures. Any "conclusions," then, regarding Harappan political organization, which is an especially difficult cultural subsystem to reconstruct under even the most ideal

circumstances, must be regarded as highly speculative.

The formation of the early states in South Asia is a relatively new subject of research and most of the work done so far comes with reference to the rise of petty kingdoms of the Vedic ‘Aryans’ and the “Aryanized” Indus tribes in the general area of the Indo-Gangetic Divide. Little work is at hand that touches upon the state formation in the Indus Valley during the Indus Age. We are therefore constrained to refer to the vast amount of theoretical work that has been conducted in reference to the rise of early states in the Near East or elsewhere. These theoretical considerations are quite useful in examining the situation in the Indus Valley during the Harappan Civilization, although they may not offer us completely made-up answers.

The Harappan society has been defined as a complex chiefdom by some scholars (59,60,61)**,** and a state level society by others (34,48,57). Generally speaking complex chiefdoms have one large settlement and only one or two levels of smaller satellite towns or villages. State level society, on the other hand, tends to be more stratified, with multiple large settlements competing for political and economic power. It is unlikely that these differences can be easily identified archaeologically and many scholars now prefer to focus on the questions of hierarchy and heterarchy rather than on chiefdom and state. Still, the debate on Harappan state or non-state is alive and arguments surrounding the social organization of the Indus Civilization often end up with the question whether this civilization was a state or not.

The concept of a ‘state’ is highly debated amongst archaeologists but has generally been envisioned as a form of political organization with a centralized leadership and economy, and a hierarchically ranked social system. Hierarchy refers to the ranking of elements in society using specific criteria, such as size, complexity, status, and power. Heterarchy refers to the relation of elements to one another when they are unranked or when they possess the potential for being ranked in a number of different ways (63). For the states to emerge, it is necessary that they have a sufficient number of people to form a complex stratified society, control a specified territory and have a surplus to maintain the specialists and the privileged. Furthermore, there must exist a mechanism to enforce rules and regulations, which explains and justifies a hierarchical administrative organization and sociopolitical inequality (58).

The Harappan cities are characterized by an oft-repeated quote: “monotonous rigid regularity of blocks after blocks of brick houses, with broad main streets (drains, etc.); varying buildings with high technical and architectural standards. All these features continue in their materials and techniques unchanged for several centuries” (21). It is then argued that such a ‘rigid regularity’ could not have been achieved without a ‘rigid’ central authority. This correlation produced the idea in Harappan archaeology that there must have existed a central authority, probably a ‘Priest-King’ who directed the affairs of the city or the state structure that ensured the standardization of artifacts, procured the hard-to-get raw materials, and directed the long-distance trade. This hypothesis is still the stuff of our textbooks, although in view of recent investigations, there is little evidence for such a single supreme authority that governed the entire civilizational area.

The concept of subordinated communities, ruled by an emperor, king, or a section of the elite within the Indus realm stems from the earliest excavations of Mohenjo-daro and Harappa, when Sir John Marshall first recognized the similarities between the two sites.These two sites, significantly larger than any other known site at the time, became the focal point of the majority of sociopolitical

interpretations of the Indus Valley. In their reconstructions of Indus society, both Wheeler and Piggott identified Mohenjo-daro and Harappa as the 'twin capitals' of an empire. Wheeler drew attention to the methodically planned cities with rectangular blocks dissected by well-drained streets dominated by an acropolis or 'citadel' mound. These citadel mounds were crowned with 'ritual buildings', including the 'state granary' at Mohenjo-daro which was the 'focal point of the regime', whilst at Harappa there were supplementary granaries that were 'marshalled on the lower ground'. Lothal was described as a 'regimented coastal township'. Wheeler used the terms such as *state, regime, marshalled,* and *regimented,* which presented an image of military or political domination achieved with the use of force, similar in nature to the later Kushan, Mughal, and Raj empires in South Asia.

Piggott developed Wheeler's concept of imperial hierarchies by heavily emphasizing the agrarian character of the Indus Civilization, envisaging a "considerable agricultural population producing an adequate surplus beyond its immediate needs for sale to the towns". The uniformity of

artifacts and materials within the Indus Valley was explained through a rigidly enforced set of laws, a strongly established commercial code and standardization of manufacturing techniques. Piggott not only viewed the Indus Valley Tradition as spatially uniform, but also temporally uniform. Throughout nine phases of rebuilding at Mohenjodaro during a 700-year period Piggott identified little change in the material culture of the site, something he highlighted as indicative of cultural conservatism and possible cultural stagnation. The parallel he drew was not with the Near Eastern communities with which Wheeler identified, but Central and South America polities with their 'rigorously authoritarian rule and elaborate religious conceptions'. Finally, Piggott inferred an indigenous origin for the Indus Valley Tradition, albeit with some external influence as to concepts of urbanization and statehood.

Piggott and Wheeler both assigned a theocratic nature to the social structure of the Indus cities. As Piggott put it: "It is clear that the potent forces behind the organization of the Harappan kingdom cannot have been wholly secular, and there is, as we have already seen, more than a hint that the priesthood of some religion played a very important part in the regulation of the Harappan economy from within the walls of the citadels of the two capital cities." (21). The partnering of the 'citadels' with the PriestKing equated the Indus cities with the betterknown urban centers of Mesopotamia, and the Mediterranean.

The influence of Gordon Child's thoughts also have had a tremendous effect on the reconstruction of sociopolitical structure of the Indus Civilization. Although Childe initially presumed a direct link between Mesopotamia and the emergence of civilization within the Indus, it was not until the fourth edition of his *New Light on the Most Ancient East* (published at a similar time to Wheeler and Piggott's seminal works) that he questioned the notion of external stimuli as the catalyst for urbanization in the Indus Valley, citing evidence of early occupations and urbanization at Kot Diji and Amri (40). Childe also questioned whether political rule was hereditary, as had been traditionally assumed till then, and proposed the concept of competing groups vying for political control.This concept of nonhereditary political rule pervades the more recent city-state series of models (1,48,64).

For Childe, the crux of the Indus Valley economy lay in the agricultural potential of the alluvial river valley, despite the self-confessed lack of archaeological evidence for large-scale agricultural practices or irrigation works. Childe, however, retained and developed ideas of subordinated communities developed by Marshall, in particular the concept of a racial hierarchy. Childe

stated that the Proto-Australoid element of the population was subservient to the 'Sumerian',

‘Eurasian’, or ‘Mediterranean’ population. He also explicitly equated the ‘Proto-Australoid’ element of Indus society with modern Dravidian populations of South India, whilst the ‘Mediterranean’ population were immigrants from the west who brought

with them the concept of ‘civilization’ (40). He likened the Indus Priest-kings with the Sumerian ‘city god’ and the Egyptian pharaoh, whose power resided in control over the urban granaries and the concentration of agricultural wealth. As such,

this racial division became not only a social hierarchy, but also an economic one.

Childe interpreted the Harappan social organization as a form of economic exploitation, as opposed to the theocratic dictatorship proposed by Marshall and reinforced by Piggott and Wheeler. Rather than ‘coolie-lines’ or servant quarters, Childe interpreted the small two-roomed structures of Harappa and Mohenjo-daro as housing artisans, most likely bonded to the Indus bourgeois who inhabited the spacious two-storied houses of the lower town. He also maintained the citadel-lower town divide of rulers and ruled, though he suggests that wealthy merchants and traders from the largest cities supported the ruling king. However, he did not indicate whether this ruling figure would have been hereditary or if there were competing groups involved in struggles for power. Childe envisaged a society that was heavily dependent upon economic cooperation between the various cities within the Indus Valley region, and argued that political rule was mostly secular.

Fairservis (3), on the other hand, developed concept of decentralization and the lack of statelevel institutions in the Harappan society by proposing that the Mature Harappan society was organized along the lines of a developed chiefdom. Influenced by the growing number of small sites (<1 ha) being identified and emerging evidence of short-term occupation of many sites including Mohenjo-daro, he suggested a model of political organization centered upon cattle herding and pastoralism. Although some later archaeologists incorporated an element of pastoralism into their peripheries (1,64), Fairservis placed the pastoral communities at the core of the Indus Valley Tradition. The concept that ‘wealth’ - in the form of cattle - lay outside of the urban centers may explain the contradictions evident in the Indus Valley cities when compared to other contemporary civilizations.

Also, rejecting concept of a strong centralized governing body, Shaffer suggested that the similarity and homogeneity in style and manufacture reflects the existence of an intensive internal distribution system rather than a central government. Furthermore, he suggested that even the smallest sites, such as Allahdino, have yielded examples of almost every known Indus artifact form, even gold, silver, and semiprecious stone, indicating practically no difference between a Harappan city and a Harappan village.

Kenoyer and Possehl, along with Maisels, and Thompson have suggested that the single state concept is not applicable to the Indus Civilization, as evidence of centralized control - such as the palaces, temples and differentiated burials seen in other early states like Mesopotamia - are not present at any of the cities. Rather, they have argued that the Indus Civilization comprises regional polities or city–states. Trade and exchange is seen as key to the social organization of the Indus Civilization. It has integrated the cities with their hinterlands and with other city–states. Such a model, while negating the existence of a central authority, replaces religion or ‘ideology’ with the integrating forces of trade and exchange. The activities of trade and exchange to take place, one does not need a supreme authority for direction.

According to some other interpretations, the uniform pattern of planned areas and their division into specialized areas indicates more the possibility of the continuity of tradition through descent rather than by means of superimposed sanctions of political leadership, religion, or trade. In the words of Sir Mortimer Wheeler: "....... which [trade and commerce] is possible due to the continuity of social classes, and their occupations. This specialization of hereditary arts, crafts and technology is normal in corporate groups when occupations are handed down from father to son. This has been the case throughout human history until the last two centuries which have been affected by industrial civilization. The continuity of residential groups also suggests hereditary occupational traditions" (55).

The use of coercion looms large on the models of political control of the Harappan society, especially for enforcing the cultural uniformity and standardization of weights and measures, as well as planning and maintaining of Harappan cities. It was probably a function more of complex social stratification of society, the institutionalization of norms, and values of sociopolitical control rather than coercion. Hence, material uniformity and planning does not imply any unitary common sociopolitical authority. Authority in this case seldom existed solely in political terms, for it is interrelated with religion which maintains rites and rituals. These values or 'ideology' seems to be common over a large area of the Harappan Civilization although their actual realization may have varied from city to city and region to region. As we know today, many of the cities in the world have a common pattern of planning and other arrangements, but the sociopolitical system on which they have been built range from democratic to totalitarian principles. Of course, we must look at urban areas that existed at pre-civilizational levels. For example, while we may say that there was the beginning of class society in the Early Indus period, it was in the sense of hierarchical differentiation in the means of production rather than classconsciousness or interclass struggle as such (53).

Then, there is the model of ' *heterarchy*'. Based on comparisons with Early Historic polities, Harappan cities were probably comprised of competing non-hierachical' groups whose centers of power would have been within each of the separate walled mounds at Mohenjo-daro and Harappa, or in the acropolis at Dholavira. These individual groups were internally organized in a hierarchical system. Fluctuations in dominance between the communities on each of the mounds probably contributed to the economic development and the rapid build up of the city as a whole. The caste system, prevalent throughout South Asia, is an example of such a system.

Although the idea of a Harappan State is loosing its strength, there are still some scholars, such as Jacobson (57) and Ratnagar (34), who strongly advocate the existence a centralized authority that permeated through whole of the area covered by the Indus Civilization. As indicated above, they take their evidence from an extraordinary level of similarity in material culture throughout the Civilization and the planning of cities and towns. These arguments are examined in the next chapter in some detail. Then, there are arguments which admit the Harappans to a statelevel society but deny them a central state. Instead, they envision the Harappan political organization as a commonwealth of city-states. We examine this aspect of the argument in Chapter I.4. Finally, there are those, who believe that the Harappans had not yet achieved the status of a state-level society and that they were basically a stateless polity. We take note of these arguments in Chapter I.5.

Summary: To summarize the evidence so far, a set of problems have been noted for the conventional and some of the recent interpretations of the material evidence for Harappan society. All previous writers have commented upon some of the features described above, in particular the manifest social

differentiation in the Harappan society and the degree of homogeneity in the material culture, which leads us to the working of city and state. As Daniel Miller emphasizes, to interpret any one of these features, they must be considered in the context of all the others (4).

The conventional model of a high degree of social stratification, supported by a large-scale external trade and a redistributive economy, has gone through a series of developments.The evidence attested by such authors has been radically criticized in later writings (13,14,65). They have successfully demonstrated the variability of subsistence activities and modes of burial and some regional differentiation but they have not acknowledged the implications of their own failures to demonstrate significant variability in other domains. Much of the writing is influenced by two sets of comparisons, one harkens to the ancient Middle East which provides the model of redistribution, slavery, and temples, and the other to contemporary South Asian society, which brings forth caste or guild-like groups.

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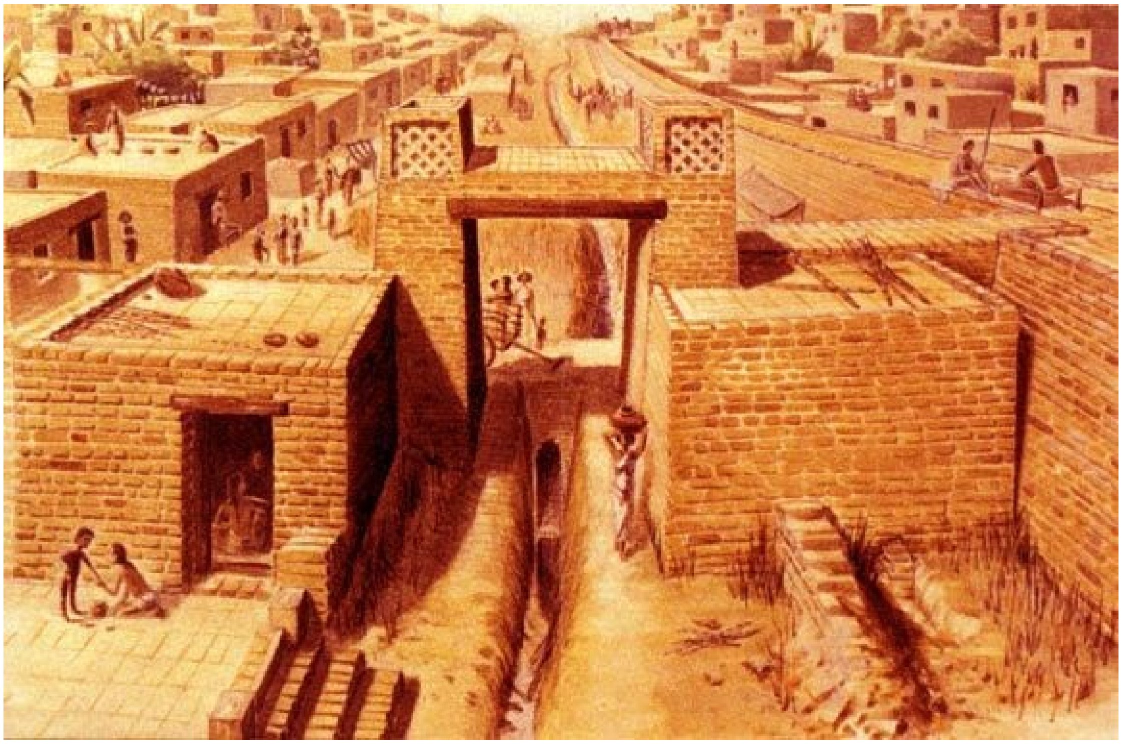
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Chapter I.3.

Harappan Society: A Unique Experiment in Social Organization?



The Indus Civilization is one of the classic early complex societies (including Egypt, Mesopotamia and China) of the Bronze Age. However, the archaeological remains of this geographically vast culture have proved difficult to understand using models conventionally applied elsewhere. In Egypt and Mesopotamia, and other early urban societies such as those of Mesoamerica or China, evidence such as wealthy burials, monumental architecture and increased bureaucracy suggest the monopolization of wealth and means of production by small groups, which are designated as the rulers or the ruling class. The appearance of a highly stratified and hierarchical society forms a major component of classic definitions of the early 'state' (51). The Indus Civilization has come to be understood, predominantly in western academic circles, as an 'alternative paradigm' in the development and structural organization of early complex societies, apparently unlike other contemporary societies. As Shaffer summarized: 'it could be that the Indus Valley, a technologically advanced, urban, literate culture was achieved without the usually associated organization based on hereditary elites, centralized political government (states, empires) and warfare' (1). This interpretation of the Indus Civilization places it in contrast to the societies in contemporary Mesopotamia and Egypt, which have often been used as aids to interpreting the archaeology of the Indus Civilization, with the effect of creating a dichotomous division between characteristically 'hierarchical' societies in West Asia, and the supposedly 'unstratified' Indus Civilization. As indicated in the last chapter, in the Indus Civilization we do notice some evidence of social differentiation and stratification but this evidence is rather subdued and hazy. At least, one has to strain oneself to find the evidence for hierarchical societal organization at par with that readily found in other early civilizations, such as Mesopotamia. This lead Fairservis to the conclusion that the Harappan Civilization was not a true urban society, being “more a village-like than a city-like”. Other archaeologists, not being able to clearly demonstrate a high level of social differentiation and hierarchical placement of various classes in the Harappan society, gravitated to the proposition that the Indus Civilization was no doubt a highly complex society but it was a unique experiment in social organization that has not been undertaken in any other early urban society.

It is difficult to describe the current positions and models scholars have of the Indus Civilization because specific statements of positions concerning many aspects of the current interpretations are lacking. Without specifically addressing topics such as the structure of society in the light of the purported lack of evidence for elite groups, scholars' positions are often revealed only by passing comments, which can often appear contradictory and understandably add up to an ill-formed whole. This is particularly a problem with statements relevant to discussions of social stratification; scholars might observe an absence of evidence for ostentatious display by elites in architecture and burial and at the same time propose the use of precious metals and stones as status-markers (2). These observations are not necessarily contradictory, but it is surprising how little effort has been made to bring them together into a coherent model of the organization of Indus society, considering that what is being proposed in passing is significantly different to the types of social structures envisioned for other early complex societies. Considering the diverse and often tangential sources of the statements that comprise the 'alternative paradigm', the list of statements and interpretations presented below by necessity involves a degree of gloss and characterization. Not every researcher will necessarily agree with all the positions presented, and individual scholars may even feel their views to have been misrepresented. However, the concern here is not to apportion blame to individuals; rather it is an attempt to describe in a holistic manner the current popular understanding of the Indus, as might be surmised from reading recent literature. It is undeniable that pieced together, these individual statements present a very specific image of the Indus, and this is reflected in how it is presented by nonspecialists, the media and popular literature.

Religion and ideology are two concepts featuring prominently in discussions of the Indus Civilization. The proposed relevance of 'ideology' to Indus society varies greatly; encompassing a means of social control; a means of explaining the lack of decorative embellishment and 'sameness' of the material culture', a means for the rulers to claim legitimacy, or as an explanation as to why there is no apparent social stratification. In the supposed absence of monopolized force, and perhaps even dominant elites, ideology or religion have been invoked as explanations for the means of social control. Likewise, Malik proposed that “discipline [was] enforced by ideological reasons, or by a superstructure of values” (34,44). Kenoyer suggests that social control could have been achieved through trade and religion (2,45), clearly associated to his proposal that the 'rulers' of the Indus were “wealthy merchants, powerful landlords or spiritual leaders” (2). The role of religion in the legitimization of the Indus rulers is not a new concept; the 'Priest-kings' of Wheeler and Piggott are well known. Yet, despite the debunking of this interpretation, the link between rulers and religion remains in recent works. Kenoyer further writes that “religion and politics appear to have been closely intertwined” (2). Daniel Miller envisions a society where power resides in the “organizational forms which ensured the reproduction of order”, proposing that adherence to an ideology of asceticism was responsible for many of the seemingly unique features of the civilization (46). Based on comparisons with Egypt and the Maya (societies deemed to have a similar 'static quality' to the Indus), Fairservis suggested that religion was the primary intensifying force in the integration of the Indus Civilization, and proposed that Mohenjo-daro was “purely a ceremonial centre”. This interpretation has been adopted by Wheatley (47), and is echoed in Flam's description of Indus sites' high mounds as “aerosanctums” (quoted in ref. 30). Possehl also proposes that ideology was the unifying factor responsible for the apparent cultural unity which appears at the beginning of the Mature Harappan period (26,36).

A study by Rissman, contrasting the contents of Indus graves with those of hoards, suggested that there was an opposition in public and private conceptions of wealth in Indus society (48). Whilst not

specifically mentioning ideology, Rissman's thinking fits in well with a wider belief that there was adherence to some form of ideology which stressed privacy, and shunned conspicuous displays of wealth. This is particularly in evidence in Possehl's work, especially his comments pertaining to the layout and domestic architecture of Mohenjo-daro (26), and is fundamental to Miller's hypothesis (46). An ideology promoting equality, or emphasizing unstratified aspects of society, has also been proposed by Vidale (49) and Kenoyer (2) to explain aspects of Indus material culture. They draw attention to the wide range of materials from which most types of object could be manufactured in the Indus, often retaining the same shape or design, and suggest that this was a means of reinforcing the “vertical integration of different classes” within the wider social system (2).

Many of the points raised above are closely related to the supposed absence of social stratification and wider hierarchical organization. Few researchers have explicitly stated a belief in the total absence of social stratification within Indus society, but it is certainly an impression one gains from the literature, as demonstrated by Maisels' unquestioning acceptance of it (30). Similarly, Rissman's work (48), which attempts to explain the range of goods in Indus graves in terms of an ideological requirement to mask social stratification rather than actual lack of social stratification, implies that an unstratified society has become the accepted interpretation. The absence of social stratification is implicit in many other discussions of Indus society. However, evidence for this interpretation is arguable. Primarily, one might consider Fentress' observations about the equal distribution of artifacts at Mohenjo-daro and Harappa, Shaffer's claim that materials known to be valuable elsewhere (such as copper) were available to a large proportion of the population and Sarcina's work on house sizes and morphology at Mohenjo-daro (22). Based on the range of house sizes, Sarcina concluded that at Mohenjodaro there were “few differences in social standing” (22). Furthermore, Indus burials are often observed to contain a relatively undifferentiated range of grave goods (48), and the skeletal remains display similar levels of stress and trauma, the implication being that all those interred may have enjoyed similar lifestyles. However, it is also generally accepted that the restricted number of Indus cemeteries and low number of located burials indicates that burial was not the predominant burial rite, and therefore those buried may well not provide a representative cross-section of the population.

The popular belief regarding the unstratified nature of Indus society, however, does not stem from clear evidence, but rather from observations regarding the absence of evidence for powerful elite groups analogous to those of contemporary Egypt or Mesopotamia. This is frequently commented upon. Obviously, the absence of such groups cannot be equated with a complete absence of social stratification or of elite groups, and this is routinely acknowledged by authors, through their references to unknown elite groups and rulers. Kenoyer, for example, refers to the absence of evidence for centralized elite institutions and wealthy elites, but proposes a network of multiple competing groups (2). It is unfortunate that the little targeted research which has attempted to elucidate aspects of Indus sociopolitical organization and centralization has drawn largely inconclusive results. This, coupled with a lack of critical thought and an unwillingness to engage deeply with the difficult issue of Indus elites, has no doubt led to the generation of a confusing picture to non-specialists and specialists alike; culminating in works like that of Maisels (30), that now have a wide dissemination among students and casual readers.

Most of the reasoning in the 'alternative paradigm' as outlined above is negative - the absence of palaces, the absence of wealthy graves, the absence of settlement patterns, the absence of evidence for warfare and so on. Undoubtedly, these observations are of great interest and significance. However, it

is an odd situation indeed that a society spread over one million square kilometers, with over 1000 recorded sites and the most extensively excavated urban remains in the Bronze Age world should be interpreted primarily on the basis of the evidence it does *not* have. Significantly, the recourse to negative evidence also betrays the extent to which implicit comparisons with other early complex societies pervade interpretations of the Indus. Observations such as the absence of temples are meaningless outside of a comparative framework, which has observed the presence of temples in other contemporary societies and judges their absence in the Indus to be meaningful. In fact, most of the 'facts' structuring the 'alternative hypothesis' are only meaningful within a comparative framework: weapons are scarce in comparison to numbers found in Mesopotamia, settlement networks are 'unpatterned' in relation to their 'patterned' Mesopotamian counterparts and the significance given to the observed homogeneity of house sizes implies those elsewhere were not. This point is at the crux of Cork's thesis (52) from which this chapter has been largely extracted.

The picture of the Harappan society built on some kind of egalitarian ethos and being unique among the early civilizations of the Bronze Age is quite popular at the present time. However, there are equally numerous adherents to a Harappan society that was highly differentiated and probably hierarchical. There are several reasons for this confidence, the most important being the existence of prestige goods and the division of major Harappan sites into two or more walled sectors, one presumably for the elite and other for the common masses. An analysis of artifacts also coveys a similar message. For example, beads were made from hard, difficult-to-obtain precious stones as well as from terracotta - the former for the ruling elite, the latter for the common masses. There is also some differentiation in pottery: finely made and decorated as well as coarsely made and undecorated; again indicating socially differentiated users. The presence of substantial architectural features, such as the Great Bath and Warehouse at Mohenjo-daro, suggests patterns of use not open to the bulk of the city's population.The limited number of stamp seals seems to indicate that not everyone possessed these splendidly crafted, probably "expensive," items of personal identification or grace. Social differentiation is also evidenced by contrasts of big-house/little-house, and baked brick-house/ mud brick-house, that are clearly present in the Urban Phase. Finally, the presence of truly sumptuous items of personal adornment, such as the necklaces found at Mohenjo-daro and Allahdino, and a growth in the use of precious metals and beads are indicative of differential access to wealth, productivity, and abundance. This picture is strengthened by the comparative evidence from Mesopotamia, a contemporary civilization of the Bronze Age with which the Harappans had trade and cultural contacts and from where very clear evidence for a socially differentiated society is forthcoming.

If we assume that the Harappan society was indeed a differentiated and to a large extent stratified, an elite class managed the Indus cities, and craftspeople, merchants, and other individuals produced and consumed products, there should be evidence for differences among people in their areas to places, spaces, amenities, and material resources. Identifying these differences should provide support for arguments advanced by Cork, McIntosh, Ratnagar, and others and would demonstrate the ways in which the people of the Harappan Civilization interacted among themselves. Quite a few archaeological studies of the Harappan Civilization have been undertaken lately, the object of which is to discern the differences and similarities between people, such as those based on gender, social status, ethnicity, occupation, or cultural or religious affiliation. These include housing and the organization of settlements; personal appearance and access to valued objects and materials; funerary practices; and health and diet. Other clues are sought in the organization of trade and craft production and the mobilization of labor for large-scale enterprises. One example of such studies is that of

Ratnagar (4). Another study is that of Kenoyer (55,56) who mainly concentrates on the evidence from Harappa. Edward Cork's (52) and McIntosh (56) studies have already been mentioned (52).

Personal Appearance: Many, if not indeed all, societies use features of personal appearance to make statements and to provide information about individuals and social groups. It should, therefore, be possible to glean some information about Indus social organization by examining variations in clothing, hairstyles, and personal ornaments. The many figurines supply much information on personal appearance, particularly that of women, and other clues come from the array of ornaments found on skeletons in burials. These data suggest some status differentiation among individuals, but not a markedly stratified society.

Hairstyles. Hairstyles may also have demonstrated the social standing of individuals. Female figurines often wear their hair either folded up over a pannier or fan-shaped frame or piled high on the top of their heads. Sometimes flowers or ornaments are worked in. A number are shown wearing a cone on their heads, and a few gold cones have been found at Harappan sites. Others have a simple bun or wear a turban. Elaborate and time-consuming coiffures suggest that the individuals wearing them had leisure and probably servants, suggesting high social status, and this is borne out by the heavy quantities of jewelry worn by such individuals. Many figures on the seals, probably of both sexes, wear their hair in a long plait. While it is possible some of these figures are ordinary worshippers, ritually coiffed, they may all be priestly servants, since no sculptures or terracottas depict people with their hair arranged in this way.

The less common male figurines and rare male statues generally wear their hair in a bun, divided horizontally by a headband, strongly reminiscent of a royal hairstyle in contemporary Sumer. A few gold fillets have been found, at Harappa, at Mohenjo-daro, and in the hoard at Allahdino, with holes at the ends for fastening them with a cord. Sometimes Harappan men wore their hair short and combed straight, or covered by a turban. The majority of men were bearded. Again, all this shows social differentiation but probably not stratification.

Jewelry: By analogy with other societies, the quantity and quality of jewelry worn may have indicated status. The Harappans' attitude to materials that were highly valued by their contemporaries was unusual. They made little use themselves of the lapis lazuli and turquoise that they obtained with considerable effort but, instead, used them for export. Gold seems to have been valued no more highly than silver. Ivory was used like bone, for everyday objects. The Harappans mainly placed a high value on skill, on the investment of labor, and on the transformation of materials, creating such valuables as exceptionally long carnelian beads, steatite microbeads, and objects of faience and stoneware. Bangles are an important element in traditional Pakistani and Indian female dress, serving as ornament or offering symbolism, in India their types reflecting such things as membership of particular communities or marital status. Men may also wear bangles, the best known modern-day example being the Sikh *kara* in Indian Punjab. Figurines and sculptures, such as the famous dancing girl, show that bangles were a common item of Harappan dress. Finds from burials confirm this. Women usually wore a number of bangles, either on both arms or on just the left, narrow ones around the wrist, and wider ones above the elbow.

The different materials from which these were made and their technological sophistication probably reflected status differentials in Harappan society. The majority were handmade of terracotta: these were probably for everyday wear, like the ubiquitous glass bangles worn today. Some were plain,

others decorated with painted or incised designs. Some were made of finer clays and fired at high temperatures. Less common but also widespread were shell bangles. Large sturdy bangles that could be worn even by women engaged in heavy manual work were known from many settlements but not in the graves at Harappa, where all the bangles found with women were of shell. These were a far more fragile type, thin kidney-shaped rings, a shape imitated in fine bangles made of faience. White or blue-green faience was also used for simple ring bangles decorated with chevrons. Other bangles were made of a copper or bronze rod bent round into a slightly open circle, while a few were manufactured from silver or from hammered gold sheet. Since faience, copper, silver, and gold bangles were far less common than those of terra-cotta or shell, their wearers are likely to have been members of the elite. Some of the latter also wore finger or toe rings of silver wire or copper.

The figurines show that women wore a great variety of jewelry, which might include ear ornaments, pendants, or anklets. Some had an ornament hanging over the forehead. A cylindrical or truncated conical amulet of black stone, or less commonly of serpentine, faience, or steatite, was worn by women buried at Harappa, suspended round the neck, and these amulets are common at other sites. Given their numbers, this may have been an ornament worn by women to indicate that they were married, like a number of pieces of jewelry worn by Indian women today.

Men were less frequently buried with jewelry. Among those at Harappa, one wore a shell bangle and a hair ornament of beads, steatite microbeads, and shell rings, while another had a necklace of three hundred and forty steatite beads and still another jewelry using seven beads of gold, copper, and stone, including an onyx eye bead (a bead decorated with concentric circles or ovals that resemble the human eye). Male figurines were also generally unadorned, though a few had a neck ornament. In contrast, depictions of ‘ladies’ or ‘deities’ of either sex wore bangles the entire length of their arms and sometimes had enormous necklaces.

Clothing. As well as jewelry, the Harappans wore clothes of cotton, leather, and probably wool, the latter probably imported from Mesopotamia, perhaps only for the elite. Here the artwork is less helpful, since most men and many of the women are depicted naked. The stone sculpture known as the Priest-King wears an elaborately decorated robe, draped to expose his chest and right shoulder. This was possibly a garment worn only by the elite or senior priests. Other, more complete stone statues show that this robe was worn over a garment resembling the modern *dhoti* in present-day India, which is wound around the waist and frequently drawn up between the legs to tuck in at the back. The latter may have been common male dress, particularly as figures on seals, possibly of men, sometimes wear a skirt that could be the *dhoti* in the untucked state. Women appear to have worn a short skirt that covered the thighs and, in some cases, a substantial belt made of strings of beads. All this may indicate social differentiation, even stratification.

Burials: Few cemeteries have been discovered and only the one at Harappa has been extensively excavated; so there is at present only limited evidence from which to investigate status differentiation in burials. Harappans seem generally to have buried their dead wearing jewelry, but rarely with grave goods except for some pottery. The number of vessels and the richness of the personal ornaments probably reflected an individual's status. The few women who were interred with a copper mirror may have been from the elite. Occasionally individuals were buried with other objects, such as a shell ladle or an animal or human figurine. People were never accompanied by seals, perhaps they did not now need the protection which the seals and other such ascribed objects provided as amulets.

While some individuals were placed in the grave directly on the ground surface, others were separated from it by a layer of pottery or clay, or their grave was lined with bricks. In a few cases traces have been found of a shroud, a wooden coffin, or sometimes both. One coffin was made of rosewood with a deodar lid; this contained a woman buried with thirty-seven pots. A burial of an elderly man at Kalibangan, in a brick-lined grave, was accompanied by more than seventy pots, some in a layer separating him from the ground surface. It is likely that individuals accorded these additional features were of a higher status, although there are other possible explanations, for example, related to religious beliefs.

The number of people buried in the known cemeteries represents only a fraction of the population. For example, at Kalibangan the cemetery contained the graves of fewer than ninety people, while the town itself accommodated somewhere around a thousand. It is therefore possible that only one section of society was buried, other members of the community being treated in some other way. All in all, the Harappan burials do not offer us much that would clearly indicate the pattern of the social or economic differentiation of the living.

Health and Nutrition: The physical examination of individuals from the excavated Harappan cemeteries indicates that the Harappans in general were well nourished and enjoyed good health, suggesting that social differences were not marked by differential access to adequate food and care. Admittedly these burials are only a sample of the population and not necessarily a representative one**.** Women's teeth were worse than men's, suggesting that men had access to a more balanced diet: This may reflect cultural differences in the treatment of the sexes (56).

Settlement Hierarchy: The Harappan settlement pattern may offer some additional clues to the organization of society. The impression given by this settlement pattern described earlier is very different from the village-town-city hierarchy familiar from many cultures, in which villages looked to their nearest town for manufactured goods and services and local administration in turn provided the town with subsistence products. In states the apex of this food chain pyramid of replicated units was a capital to which all the rest of the settlements were politically, socially, and economically subordinate.

This is not obvious in the Harappan Civilization. In contrast, the Harappan society was more akin to an organic body: a single functioning entity composed of a number of different and complementary units, each with its own particular function within the whole. The head, limbs, organs, and other parts of the body equate to farming villages, pastoral camps, trade centers, hunter-gatherer camps, fishing villages, procurement centers, processing centers, and other types of Harappan settlement. As parts of the body are made up of cells, sharing the same basic biological elements but often specialized in function, so the Harappan settlements were made up of people who were occupational specialists, including officials and priests, as well as farmers, pastoralists, fishers, artisans, and traders, their composition depending on the function of the settlement (56). To continue the analogy, the internal distribution network was the circulation system that ensured that all the things necessary for life reached all parts of the body. Whether this had one head (Mohenjo-daro or Harappa), two, five or more is not yet apparent, but clearly this civilization was unusual for its time in how it operated.

Differing with this interpretation, Fairservis and Miller bring to our attention the uniform access of the whole array of Harappan artifacts by almost all settlements, ranging from the largest (e.g. Mohenjo-daro) to the smallest (e.g., Allahdino). In this respect, as Miller has pronounced, there was

de facto no ‘village’ in the Harappan polity, or, as Fairservis has proposed, the whole society was ‘more village-like than citylike’.

Artifacts: The main advocate of the idea that inhabitants of the Indus enjoyed a relatively undifferentiated degree of access to a wide variety of goods and materials is Shaffer: “Metal artifacts were manufactured for use in daily activities and were available to a broad segment of Indus society, urban or rural. A similar distribution and access to items manufactured from semiprecious stones may also be postulated” (1). This statement draws both on the previous doctoral research conducted by Fentress, and by Shaffer's own experiences excavating at Allahdino. This tiny site in the Karachi district of Sindh appeared to Shaffer to have all the architectural and artifactual components of the larger Indus sites, suggesting to him that goods such as metal tools were as equally available in major urban centers as they were in regional village communities. Miller's survey work at Harappa and Mohenjodaro also led her to the conclusion that copper was a plentiful raw material (15) and available to large segment of the society. Fentress' research (8) attacked the notion of cultural homogeneity across the Indus by comparing the proportion of objects present at Mohenjo-daro and Harappa with the relative volume of excavated earth. Part of this involved investigating where at the two sites material had come from, and this revealed that some supposedly 'valuable' materials, such as copper and bronze tools, were not found most frequently on the 'citadel' or 'high' mounds, but in the lower, residential areas. This observation forms part of the argument that the 'citadel' mound at Mohenjo-daro was not primarily an elite, high-status area, and suggests that no specific group within these cities enjoyed preferential access to materials and commodities.

Reacting against the authoritarian empire envisioned by Piggott, Fairservis famously remarked that the Indus was essentially village-like in character (31), implying a level of sociopolitical complexity below that of an early state. This position has essentially been reiterated by Malik, but with explicit reference to chiefdom-level social organization (34). Shaffer has also made comments relevant to the issue, stating that the Indus did not represent 'a mirror image of Mesopotamia's urban experiment or, for that matter, any other region which witnessed the development of comparable cultural achievements' (1). Kenoyer has interpreted this to indicate a pre-state level of political complexity (35), although Possehl believes that the term 'pre-state' would mean little to a non-evolutionary anthropologist such as Shaffer (36). The contrast drawn by Shaffer between Indus and Mesopotamian urbanism is, however, significant, and demonstrates the powerful influence that Mesopotamian archaeology has on interpretations of the Indus Civilization. Possehl, claiming to share Shaffer's stance (36), has tried to find a middle ground which acknowledges both the organizational complexity of the Indus and structural differences with Mesopotamia and Egypt. He proposes that the Indus was a 'nonstate' - a form of sociopolitical organization which does not conform to current definitions of an 'archaic state'. Most recently, Thompson has proposed non-state level complexity, based largely upon the absence of warfare and monopolized force (37). The rejection of statehood has not found favor with all researchers (4,35,38), but the notion that the Indus was organized into a single, unified state or empire has, largely been abandoned in favor of a number of regional polities (26,39,40). There is, as Possehl observes (36), no direct evidence for warfare in the Indus. There is no commemorative or victorious art, and no archaeological traces of ancient battles. However, the meagre artistic record in the Indus provides evidence for very little at all, and archaeologically identified battle sites are incredibly rare; it is no surprise that none have been located. More complex is the indirect evidence cited by many authors to suggest an absence of pitched battles and even monopolized force (37), a characteristic trait of state-level society (41,42). Primarily, this has involved an observed paucity and inadequacy of weaponry, especially in comparison to contemporary Mesopotamia. Architecture also

forms part of the argument: circumvallations are dismissed as ineffectual, or attributed to a non-defensive function such flood defense or control of the economy, and city gates have been dismissed as too simple to perform a defensive function, and are said to have been better suited to repelling robbers and cattle raiders (20). The belief that the Indus was a society devoid of warfare is so entrenched in popular understanding of the Indus, that work has been published with titles such as 'A Peaceful Realm' (43).

Nevertheless, some clues to social organization can be gleaned from the types of artifacts recovered from Harappan sites. Some tools were made in different materials, depending on the status of the owner: For example, high-status households may have used metal vessels for cooking and serving food, while other people had ceramic vessels of varying quality. Similarly, the elite may have had a higher proportion of their tools in metal rather than stone, although the abundance of copper and bronze tools found in Harappan settlements shows that few households had none. There is considerable evidence that good-quality materials were used by people in all the urban settlements and even in villages (for example, people in the small village of Allhdino owned copper ornaments and beads of faience as well as more ordinary shell and terra-cotta beads, similar to those found in the major city of Mohenjo-daro). The artifactual evidence, such as it is, therefore points to a widespread good standard of living and relatively little social differentiation.

Monumental Buildings: Possibly the best known ‘fact’ about the Indus is the absence of palaces or temples analogous to those in contemporary Egypt and Mesopotamia. Wider societal implications of this become apparent in the work of recent researchers, who mention this in terms of an absence of centralized institutions (2). Although the difficulty in identifying structures analogous to Mesopotamian palaces and temples in the architecture of Indus sites is undeniable, not all scholars have been convinced of the actual absence of buildings performing these functions. A number of buildings around Mohenjo-daro and Harappa are clearly of a different magnitude and function to the residential units which surround them. This was noticed by the earliest excavators, with Mackay dubbing a large structure in the DK- area the 'palace' (3). A number of other buildings on the 'Lower Mound' of Mohenjo-daro are similarly massive and unlike those surrounding them. Kenoyer, however, points to their dispersed location in comparison to Mesopotamian examples as reflecting the absence of centralized institutions of power at the site (2). Ratnagar made a basic comparison of a number of large buildings at Mohenjo-daro with palaces in Mesopotamia, concluding that the former were smaller and unlikely to have performed the same functions (4). She does, however, move on to propose that the entire 'citadel' mound at Mohenjo-daro may have functioned as a palace. Unfortunately, this intriguing suggestion is close to that of Wheeler (5) and Piggott (6), who saw in the high mounds of Mohenjo-daro and Harappa evidence of oppressive and militaristic elites. Wheeler and Piggott's interpretations have been criticized for their reliance on a limited number of sites and obvious imposition of their own colonial views onto the past, and this has had a negative impact on the acceptance of elite interpretations of the 'citadel', Ratnagar included.

The very association between elite groups and the 'Citadel Mound' at Mohenjo-daro is criticized by Kenoyer and Fentress, the former suggesting that the citadel mound has evidence of craftworking in the 'public' architecture upon it along with small houses not consistent with an elite complex (7), the latter stating that the distribution of artifacts at the site does not suggest that the 'citadel' mound was in any way different to the rest of the site (8).

The supposed absence of palaces and temples is closely related to a further interpretation of the Indus

archaeological record: the absence of centralized production or control. This is in part connected to reanalyses of the 'granaries' at Mohenjo-daro and Harappa, which point out how little evidence there is that they performed such a function (1,10,17). Previously, the 'granaries' had formed the principal evidence for a centralized redistribution system. The negation of the chief evidence for massive redistributive structures is particularly emphasized by authors who do not believe there to have been significant levels of centralized control in the Indus (see especially Shaffer ref.9). Further and more recent attempts to elucidate aspects of centralization have employed site surface surveys at Mohenjo-daro and Harappa (12,13,14,15) to seek evidence for the organization of craft production in these two principal cities. Miller has perhaps commented most extensively on the findings, and she believes there to be no evidence for centralized craft production at either site based on the distribution of high temperature manufacturing debris (e.g. slags and kiln fragments). Kenoyer further suggests that evidence for craft production within later phases of the 'Great Bath' building at Mohenjdaro indicates shifting power bases within the city, rather than a permanent, centralizing institution (7).

Another statement often made of Indus monumental architecture concerns the purpose and usefulness of city walls and gateways. The only large excavated Indus site not to have yielded evidence of some form of town wall is Mohenjo-daro, although Wheeler made an unsubstantiated claim to have found evidence of fortification (17,23). However, parts (even most) of Mohenjo-daro are generally believed to have been elevated upon artificially created mudbrick platforms, with baked brick retaining walls: essentially creating the same physical impediment to any individual standing outside the city. Circumvallations are a characteristic feature of Indus settlements, but scholars have been unwilling to see them as serving the same functions as those surrounding contemporary Mesopotamian cities. There, evidence from literary sources such as the Epic of Gilgamesh suggests that city walls were an integral part of each city's identity, forming a boundary between the urban, civilized world, and the chaotic, uncivilized world of non-sedentary communities outside. In the context of endemic warfare between various city-states, Mesopotamian city walls are also believed to have performed a very real defensive function. This has not found favor as a function of city walls in the Indus Civilization. Early explanations were that they were put in place as flood defenses, in part based on the numerous 'flood' deposits found throughout various levels at Mohenjo-daro, but the identification of these deposits as such is problematic (18); besides which walls and platform are present at Kalibangan, with no evidence for flooding (19) and also at sites such as Surkotada which are not on floodplains. More recently, the presence of walls around cities such as Harappa has been interpreted as controlling the movements of people for the purposes of trade or taxation (2), an interpretation that fits with Kenoyer's view that the Indus rulers governed through trade and religion, in a society with no warfare. Taking a similar stance, Kesarwani (20) published a paper arguing that in comparison to Mesopotamian gateways, those in the Indus were lacking in any embellishments which would have facilitated their use in a defensive capacity. Indus city walls and gates are not generally thought to have performed defensive functions, analogous to those in contemporary Mesopotamia.

Domestic Architecture: Turning to domestic architecture, one is currently confronted with a smaller depth of research, but one which in no way argues for any less contrast with Mesopotamian domestic architecture. The most influential study so far has been that of Sarcina (21,22), who found there to be little variation in house sizes at Mohenjo-daro (21), a clear contrast to the apparent situation in Mesopotamia (23,24). She has also proposed, as has Ratnagar, that the vast majority of houses were occupied by nuclear family units (22). This is in contrast to the commonly perceived heterogeneous populations resident in Mesopotamian cities, with both textual and archaeological evidence for the presence of coresident extended family groups (23,25) and for the presence of neighborhoods

roughly organized according to status. Sarcina's typology for houses at Mohenjo-daro (which emphasizes the repetitive appearance of a limited number of layouts) and her statements concerning the similarity of size arguably fit within the view that the Indus was heavily standardized. However, it is also clear that Sarcina's work has been influenced by (and has in turn influenced) the most influential of all interpretations regarding Indus Civilization: that it was a society with very low levels of social stratification, and hierarchical organization in general.



House A1 may have been a temple or palace of an important leader. Two doorways lead to a narrow courtyard at a lower level. A double staircase leads to an upper courtyard surrounded by several rooms. This house had numerous seals and fragments of a stone sculpture depicting a seated man wearing a

At Mohenjo-daro, almost all houses had a staircase as though leading to a second story. This explanation is perhaps not right. A better explanation is, however, ethnological. Throughout Pakistan's rural areas flat roofs are used for cooking, eating and sleeping while the rooms below are used primarily for storing of valuables or for taking shelter during the occasional rainfalls. Hot days of summer are generally spend under the shade of trees, the nights in the courtyard and on the roofs. It appears that the Harappan also had the same life style and the stairs found at many Harappan houses may not indicate a second story. Whatever the case may be, the housing structure do not give us much to go on in terms of social differentiation of the residents.

Individual houses in larger cities, such as Mohenjo-daro and Harappa, were equipped with a number of amenities, the most important of which were bathing and toilet areas, directly connected to a street drain or a cesspit. The supply of water was assured through the construction of a

cloak over the left shoulder

Differences in social status are often apparent from differences in the size and quality of houses. Evidence of this in the Harappan domains, however, is relatively limited. The majority of Harappan

houses consisted of a courtyard surrounded by rooms. There was some variation in the number of rooms, and some larger houses had several courtyards. In some cases larger houses were surrounded by small ones, suggesting an elite household with those of dependents but probably more likely a common house of a single clan. Such residential arrangements are still met in the rural areas of Punjab and Sindh. large number of wells or water reservoirs. Although we do not know exactly how these features interacted in the life of the Harappans, one thing is sure: the use of water in bathing, ritual or otherwise, and the disposal of the soiled water out of their homes, played a very important role, probably ritualistic and religious. One does not see any sign of differentiation in this respect as well.

The investigation of Harappan suburbs might be revealing; one small excavation in a suburban area well outside the walled Lower Town at Mohenjo-daro suggests there was little difference in quality between housing in the city center and in the suburbs. Similarly, the collection of several houses at Mohenjo-daro and Harappa, which Wheeler designated as ‘coolies’ quarters and another archaeologist as ‘slave’s dwellings’. Recent interpretations, however, negate such a designation: they are small houses but they were built with the same care as employed in the construction of other houses. Analogies with other civilizations would lead one to expect palaces housing the rulers of the Harappan state, either on the citadel or in a segregated part of the lower town. Nothing certainly of this nature has been found at any Harappan site.

The current understanding of Indus architecture would appear to be based largely on the work of Sarcina (22) at Mohenjo Daro, although Michael Jansen’s resurvey project at the site has also shed some valuable light on the subject. Sarcina published at a time when research was only just beginning to question the perceived cultural uniformity of Indus material culture, and as such her work paints a picture of a largely uniform, undifferentiated and egalitarian group of people living at Mohenjo-daro (21). The wider context in which this interpretation is based is now unfashionable; perceived to be largely the result of poor and limited data (26,59). However, Sarcina's statements concerning the social homogeneity of the population at Mohenjo-dsaro is clearly associated with the 'alternative paradigm' and the supposed absence of social stratification in Indus society. Further statements by Sarcina and Ratnagar (60), suggesting that the majority of the population of Mohenjo-daro resided in nuclear family units, add to the picture of social uniformity, and provides a point of contrast to Mesopotamian cities, where populations are assumed to have been largely organized into extended family groups, or to have encompassed both nuclear and extended groups. Domestic architecture in the Indus also features in discussions of religious practices and beliefs, and ideology. Initially, it can be observed that Indus houses differ from their Mesopotamian counterparts in a number of ways. They have more staircases, they are on average larger, they have more rooms, they often have hydraulic features such as wells and 'bathing platforms' which are absent from Mesopotamian houses, they have more entrances and their courtyards are less regularly located. Other characteristics, some different from Mesopotamia and some similar, can be summarized as follows (52):

- Houses at Mohenjo Daro are on average larger than those in the Mesopotamian sites considered, but also have the highest mean number of rooms.
- The *range* of house sizes at Mohenjo Daro and the comparative sites is broadly similar.
- Houses at Mohenjo Daro cluster around four sizes: 20-80m2, 80-180m2, 200-300m2, with a further few structures over 380m. This is more pronounced than at Mesopotamian sites, where there is a gradual decline in the number of houses as size increases. This suggests a hierarchically organised population rather than a socially undifferentiated one at Mohenjo Daro.
- In contrast to Mesopotamia, there are equivalent numbers of small and large houses at

Mohenjodaro, suggesting a different socioeconomic structure to the population.
• Different excavated areas at Mohenjo Daro and Nausharo have different characteristics in terms of size and types of building; this is in keeping with Mesopotamian cities, where evidence exists for discrete neighborhoods.
• There is no certain method of extrapolating family structure from house size and layout alone. However, using a comparative approach it is clear that there is no architectural evidence that the populations of Mohenjo Daro and the Mesopotamian cities were composed of significandy different types of family organisation.
• Courtyards, which are important and centrally located in Mesopotamian houses, are less integral features in many houses at Mohenjo Daro. They are often located to one side of the house rather than the centre, and do not function as the focal point of access routes as they do in Mesopotamia.
• The location of wells on access maps at Mohenjo-daro indicates that most were within easy reach of the main entrance. This is in keeping with the assumption that wells were shared features.
• There is some evidence to suggest that 'bathing platforms' were located in harder to reach parts of the house, indicating a concern for privacy, but litde to suggest that these features may have been ritual spaces.
• Indus cities were architecturally very partitioned places: differences in height, walls and areas of empty space were all used to create divisions within setdements. Some features of overall town planning (such as the association between monumental architecture and height) are common to both Mesopotamian and Indus cities.
• None of the architectural evidence to support the interpretation that Indus houses were particularly private or forbidding places is unique - they are standard features of hot and arid climates, and are common in Mesopotamian housing. The placement of wells may even indicate that visitors were commonplace.

Settlement Pattern: Studies of broader settlement patterns have produced wide range interpretations, from Possehl's statement 'no one has successfully demonstrated that the settlements of these people can be rationalized into a three- or four-tier system that is hierarchically arranged' (26,27) to Mughal's claim (28) to have identified a four-tiered settlement hierarchy in Cholistan from the Hakra through to Late Harappan periods. Unfortunately, Mughal's formulation of a four-tiered settlement hierarchy is different to that used elsewhere, and using his methodology, one could posit as many tiers in the system as there are sites. Kenoyer also sees the range of sites as falling into four 'levels' of site-size (29), but he does not couch his observation in the hierarchical terminology of Mughal. Indus settlement is also observed to have been predominantly formed of rural village communities, in explicit contrast to Mesopotamia, where the bulk of the population (including agriculturalists) was held to have lived in cities (30,31). The non-hierarchical and decentralized bias of this particular interpretation is plain. Few statements regarding the distribution of Indus sites are corroborated by sufficient data, and are typically based on very impressionistic and uncritical readings of the evidence. One is left with the probability that Possehl is right, and once again this is consistent with the idea of a society in which there was little hierarchy, extending even to the suggestion that the largest sites did not form the centers of integrated settlement systems. Archaeologically recovered evidence for ancient settlement networks and hierarchies are used to infer the wider processes believed to have influenced the growth and form of urbanism. Primarily, this has taken the form of an association between specific types of settlement pattern (typically the presence of a three or four-tiered settlement size hierarchy) and the emergence of state-level complexity. Shifting settlement patterns can also inform our understanding of trajectories towards urbanism, social change, possible population movements, the economic integration of (and interaction between) areas, and the

organization of agricultural practices. By contrast, Indus settlement patterns have often been used to supplement material culture (typically ceramic typologies) in the identification and location of hypothesized political and/or cultural subdivisions within the greater Indus Valley area. Although some scholars (60,61) have attempted to demonstrate the appearance of tiered settlement hierarchies during the Mature Harappan period, most scholars who have commented on the subject recently reject this. The apparent absence of hierarchically structured settlement patterns is a point of contrast with Mesopotamia, and dovetails neatly with the 'alternative paradigm's' dissatisfaction with hierarchical or stratified forms organization in the Indus in general.The following points may be noted as a summary of findings (53):

- Overall, Indus settlements cluster around 7ha8ha, 12ha-16ha and 25ha - 40ha, with a further 'primate' site (which is at least twice as big as the second largest site) in each area. There are regional differences in the clustering: sites in Baluchistan, for example, tend to be smaller. Although they may not correspond to Mesopotamian setdement patterns, those in the Indus cannot be described as 'unpattemed' .
- There is an overall growth in the number of sites of all sizes from the Early Harappan to the Mature Harappan periods. There is a significant increase in the number of mid-sized sites and no evidence of rural abandonment, in contrast to the process of urbanisation described in the area around Uruk.
- The increase in the number of mid-sized sites means that the bulk of setded area was accounted for by the primate site and the mid-sized sites. In the Nippur and Uruk survey areas, by contrast, total setded area was bimodally split between the largest site and those between Sha and 10 ha. The importance of mid-sized settlements to the Indus settlement network invalidates Fairservis' claim that it was a society based on villages.
- The appearance of primate sites in the Indus during the Mature Harappan is a point of similarity with the process of urbanisation in West Asia.
- Indus settlement networks are characterized by prima-convex rank-size distributions, whereas in Mesopotamia settlement networks typically have convex distributions, or less frequendy primate distributions (the cases of Jezira in the Later Third Millennium and the Uruk survey area).

The analyses of settlement patterns once again revealed different trends across the different areas considered - both between the Indus and Mesopotamia, and between the discrete areas of the Indus adopted as units of analysis. When ordered and displayed in the same manner as Adams did early Mesopotamian settlement size data, Indus settlements appear to cluster around 7ha-8ha, 12ha-16ha and 25ha-40ha, with a further 'primate' site in each area, at least twice the size of its nearest rival. Unlike the overall decrease in number of smaller, rural sites in the combined Nippur and Uruk survey areas that accompanies the appearance of fully urban sites, the Indus sees a growth in the number of settlements of all sizes, in each area. This may be partly responsible for the greater ordering of smaller and mid-sized sites in the Indus in comparison to Mesopotamia. Added to the fact that the largest Indus sites tend to be smaller than those in Mesopotamian survey areas, this suggests that cities did not grow as a result of widespread rural abandonment; from which one might infer that they a smaller proportion of agriculturalists living in them. Despite the growth in number of small sites, it would appear (using settlement size as a rough proxy for population) that most people in the Indus lived in either the largest site, or mid-sized sites (25ha-35ha). This is in contrast to Mesopotamia, and the Uruk-Nippur survey areas in particular, where the populations appears to have been split between the largest site and smaller sites (5ha-10ha). Indus setdement patterns are characterised by primo-convex rank-size distributions (with Monte Carlo simulation suggesting the possibility that sites in Baluchistan and Saurashtra originally had log-normal distributions), whereas those in Mesopotamia tend to be convex. Clearcut interpretations of this are complicated by the tendency for mid-sized sites

to cluster together geographically in Haryana and Cholistan.

Metalwork: The smelting of metal ores and production of finished metal artifacts is seen as one of the most technologically elaborate craft activities conducted by the Harappans (63). Yet in many ways the production and consumption of Indus metalwork is still poorly understood and remains one of the least studied of Indus craft traditions (64). The ore sources and involvement of external trade in copper and tin acquisition are still disputed, and the uses and consumption of metalwork are obscured by the selective presentation of finds from sites and the inability to securely identify the original contexts in which they were found. The selective presentation of data in particular is a significant problem, as it both makes the total number of Indus metal objects available for study much smaller than those of other Third Millennium societies, and it also prevents a full understanding of which objects were most predominantly made of copper and bronze. The production of metalwork has, however, received more attention recently, with studies such as surface surveys at Harappa and Mohenjo-daro (65,66,67) contributing to our understanding of some aspects of on-site metalwork production.

The study of Indus metalwork can help investigate the validity of various constituents of the 'alternative paradigm' interpretation of the Indus Civilization. Primarily, this involves testing the suggestion that it was a warless, nonviolent society. Although an argument including wider aspects of material culture than metalwork is now put forward by those that support this interpretation, it is clear that the 'peaceful Harappans' hypothesis originates in the comments made about metal weaponry in the initial excavation reports of Marshall (68) and Mackay (69). There have also been a number of loosely related comments made about metalwork that are related to the wider interpretation of the Indus as a society lacking significant vertical stratification. These include statements to the effect that metalwork was relatively valueless, available to the majority of the population and that production was not centralized.

Since the earliest reports from Indus excavations, Indus weaponry has been portrayed as technologically inadequate for offensive use, inferior to Mesopotamian weaponry and outnumbered by tools at Indus sites. Mackay was the first to comment that the blades (i.e. spears, daggers and knives) found at Mohenjo-daro would 'double up upon impact', rendering them impractical for use in battle. This later made its way into the work of Wheeler (‘buckle on impact’), Agrawal ('withou the support of a wooden midrib of the shaft, they would buckle'), Rao (‘thin sheets of copper'), Basham ('the blades of Harappa were flat and easily bent') and Kosambi (the spearhead would have crumpled up at the first good thrust'). The general ineffectiveness of weapons was noted by Piggott (6) and Fairservis (70). Metallurgical analyses have also downplayed the significance of weaponry: Sana Ullah (71) claimed that the scarcity of tin bronze resulted in it being reserved for items 'of a special nature', such as 'tools, razors, jewellery or ornamental vases', as did Rao (72). Unfavorable comparisons between Indus and Mesopotamian metalwork are present from the earliest reports as well: Mackay (73) hypothesized that the 'primitive weapons' of the Indus (compared to the socketed and midribbed blades of the West Asia) demonstrated the Indus to be culturally isolated. This theme reappears in the work of Ratnagar ('The range of copper/bronze tools is limited, and the forms are elementary in comparison with contemporary Mesopotamia' in ref.4). The scarcity of weapons in Indus contexts is commented upon by Mackay (“judging from the small number of weapons of offense and defense, the people of Mohenjo-daro appear neither to have been a warlike people nor have feared invasion”, in ref. 74), and again by Lal (58), Agrawal (33) and Ratnagar (4). In two recent treatments of the topic, Maisels (30) states that: 'there is no evidence for armies, either in terms of

imagery or equipment', whilst Mcintosh (43) suggests that Indus weaponry such as arrows and daggers probably served as hunting implements. However, none of these statements has been given critical consideration, or been tested. In particular, the almost verbatim repetition of Mackay's original comment regarding the thinness of blades suggests that it has simply become received wisdom.

During the Mature Harappan period, a wide range of objects came to be manufactured from metal (32), prompting suggestions that the material performed a predominantly functional role, or was a relatively cheap material. Miller has shown that the likelihood of actual smelting taking place at either Harappa or Mohenjo-daro is very slim. The relative abundance of copper prills and the unrestricted distribution of cuprous slag at Harappa suggest to Miller that copper (not copper ore) was a widely available material and the production of metal objects not a particularly centralized or controlled industry (11,12,13). Related to such interpretations are further examples that suggest that an attempt to mask social inequality, or stress the 'horizontal integration' of society, is visible in Indus metalwork. Vidale (49) and Kenoyer (2) have both commented on the similarity in form of Indus metal and ceramic vessels, interpreting parallels in design as reflecting a concern to stress links between all social levels of Indus society, whilst simultaneously signaling status differences through the use of a valuable material. Rissman (48) goes even further, arguing from the observed contrast between hoard and grave contents that there was a clear difference in publicly displayed (funerary) and private (hoards) values. Rissman proposes that the limited Indus graves available for study involved a conscientious attempt to mask social and economic inequalities within society.

The interpretations referred to in the preceding paragraphs are fairly diffuse, but it is clear how they have all been influenced (and in turn, influence) the perception that the Indus lacked a society vertically stratified in the same manner as contemporary societies in Middle East, Asia and Egypt. The supposed absence of powerful elites goes hand in hand with the interpretation that the distribution and consumption of metal goods was not largely restricted to a particular group of people. The idea that metal was relatively valueless, implied by its supposed utilitarian application and broad distribution, fits in with a society in which there is no elite group using material wealth to signal their social standing. That these interpretations of metalwork have been influenced *a priori* by the model of an unstratified society is demonstrated by the fact that the trends described by Shaffer, Fentress, Miller, Kenoyer and Vidale could equally reflect a disproportionately wealthy population at the large sites from which they obtain their data as the low economic value and widespread availability of metal. This possibility remains unaddressed by these authors.

As with any study of Indus artifacts, problems exist relating to the manner in which the bulk of published sites have been excavated. The majority of Indus metalwork comes from early excavations at Mohenjo-daro, Harappa and Chanhudaro; sites that were dug unstratigraphically and before the idea of an 'Early Harappan' period was formulated by Mughal (75). Our understanding of metalworking in this period, and the changes in metalworking practices and the uses and consumption of metal between the 'Early and 'Mature' periods is therefore limited by the fact that information from the earlier periods has been amalgamated with that of later ('Mature') periods. Further issues surround the selective publication of data. This is a particular problem when dealing with early Twentieth Century excavations, but unfortunately remains common practice in South Asian archaeology. For example, whilst just over 100 metal objects are described and illustrated in the Lothal publication, around 1500 objects were found of which around 1000 could be identified (72). An examination of the site's collections and museum by Edward Cork revealed only 274 copper artifacts, 40 of which

were unidentifiable, and on top of which there were ten items published in the report missing from the collections. Although this data constitutes only a tiny fraction of the remains originally found at the site, it nevertheless allows a check on the representative nature of the published material.

A number of recent works have dealt specifically with Indus metalworking. All are largely descriptive, and the enduring influence of the earliest excavations is visible in many. Kenoyer and Miller (32) are understandably quite descriptive in their approach to metalwork: as they point out, theirs is the first summary of the topic since Agrawal in 1971 (although Chakrabarti and Lahiri's book had already been written, Kenoyer and Miller were not aware of it). Furthermore, they argue that the age, paucity and fragmentary nature of the data do not lend themselves to an immediate in-depth study. In light of this situation, Kenoyer and Miller take stock and collate hard to access information. However, beyond reviews of Indus metalworking techniques, metallurgical analyses, ore sources and evidence for onsite manufacturing, no real attempt is made to place metal objects and metalworking within any social context. Chakrabarti and Lahiri (76) is similarly lacking in interpretation or discussion of the significance of Indus metalwork, beyond mention of 'trade mechanisms'. Marshall and Mackay are quoted at length, their plates are referred to in preference to being reproduced, and the old interpretations and typologies are largely adhered to. Significantly, little new or unpublished data is added, no new concepts are introduced, and the work is simply a summary of published material. The main departure from long established models and ideas is the addition of a political subtext, criticizing any suggestion that outside influence (that is, outside the borders of modem India and Pakistan) may have been involved with Indus copper sourcing.

In the last ten to fifteen years, targeted research projects have begun to place metalworking within the package of complex pyrotechnologies employed by Indus craftsmen, and stressed its potential for revealing aspects of social organization, the segregation and control of production and the issue of full and part-time specialists (9,11,64). Bhan et al. (77) provide a useful summary of metalworking techniques apparent in the Indus assemblage, but fail to identify why or how these techniques are significant or meaningful in context of Indus society. Where Bhan et al. provide most non-descriptive content is the discussion of ore sources. Vidale (49), and Vidale and Miller (63) examine the techniques and practices of Indus craftspeople (including metalworkers), exploring the link between the manufacture of technologically highly elaborate items from easily procurable materials (an Indus trait) and political complexity. Heather Miller's work tries to infer aspects of social and/or economic organization of craft production (including metalworking), as a means of clarifying the nature of the elusive Indus elite. Whilst Miller's later work is unable to support either a powerful and centralized elite or simply cooperative groups of city-dwellers, her work has made some important contributions to our understanding of metal processing at Indus cities. These include overturning the identification of nearly all existing metal processing areas and structures, the location of new metalworking areas (supported by surface survey data), the demonstration that no large-scale smelting took place at Harappa and Mohenjo-daro and the observation that copper working is usually an isolated craft activity. It is unfortunate that Miller's ability to infer societal and organizational structure of Indus cities is understandably limited by her use of survey data, which divorces the activity areas she locates from the specific contextual data available for excavated areas.

Largely stripped of social context by poor excavation and recording, Indus metalwork and metalworking is often evaluated in purely technological terms. Whilst statements such as 'the stark simplicity of the Indus bronzes is very manifest' (78) can be sympathized with, this judgement relates purely to a modern, academic framework, with a degree of implied technological evolutionism (the

implication being that the 'simple' Indus metalwork is technologically retarded, rather than involving cultural choices). In reality, the social behavior and relationships surrounding activities such as metalworking may have been as important as the material aspects themselves. Two studies involving Indus metalwork that have begun to address this type of issue are Rissman (48) and Lahiri (79). Work by Rissman has highlighted the apparent discrepancies between public and private conceptions of wealth in Indus society, comparing the contents of (predominandy metal) hoards with grave goods. Lahiri links the predominance of pure copper (over tin bronzes) in Indus contexts to later and ongoing Indian tradition, in which pure copper is ritually superior to bronze or other copper alloys. She also draws attention to a strong tradition of metal recycling on the subcontinent, and suggests that this explains the wide variety of copper alloys in circulation, both in the Indus period and later. Whilst this argument does not account for similar levels of unalloyed copper use in Mesopotamia and Iran and the Persian Gulf, and relies heavily on later Hindu texts for evidence, it is a significant effort in terms of explaining choices made

The perceived inadequacy of metal weaponry described above was without doubt the first reason for authors to propose the presence of a warless society in the Indus, but it is no longer the only line of evidence. The unsuitability of city walls and gates for defensive purposes, the absence of archaeological traces of actual battles, the absence of burials with weapons, and the absence of art depicting warfare have all been added to the poor weapons. The matter of war and peace has already been discussed in the last chapter and as such we need not repeat what has already been said.

The most principal shortcoming of such observations concerning the effectiveness of Indus weaponry is a lack of appreciation of the context from which the bulk of the material derives. Most Mesopotamian weaponry, especially more elaborate examples and technologically advanced designs, has been found in funerary contexts and votive deposits (80,81). By contrast, no weaponry has been found in Indus graves, and the known hoards appear connected to the storage of scrap for recycling rather than ritual deposition (48). With the added difficulties in identifying Indus public architecture (especially palaces or temples), most Indus metalwork appears to have been found in domestic, residential contexts. The failure to distinguish between these types of context ignores the very different way in which they are structured, and especially the types of artifact that will be deposited in them. Burials are deliberately structured deposits, and their contents cannot be compared to material deriving from contexts representing accidental loss, discard or retention for later use or recycling. The message conveyed by burials, as public displays (through the ceremony, type of tomb, kinds of grave goods etc), will conform to the ideology and worldview of the survivors. This may include the deliberate manipulation and misrepresentation of social reality. Rissman (48) has proposed that the apparent absence of rich Indus burials is the result of an attempt to mask inequalities within society.

Mesopotamian elite burials also convey social messages, and the association between the warrior and elite identity formed a part of this. The absence of arrows and sling bolts in burials, both of which formed important parts of warfare in West Asia during the Early and Middle Bronze Ages, suggest that the weapons in found burials had more to do with projecting a specific image than they did with the actual apparatus of war (12,81). The fact that weapons are so common in the royal graves at Ur is, therefore, no more indicative of a society engaged in permanent warfare than Indus graves without weapons are indicative of a totally peaceful society. The uncritical comparison of weapons deriving from high-status burials in West Asia with those from residential areas at Indus sites has given the (completely incorrect) impression that the latter were abnormally scarce and technologically simple. In fact, it is the metal weapons from sites such as the Royal Cemetery and the 'A' cemetery which are

abnormally numerous and elaborate. In summary, we may conclude (52):

• Work with the HR area catalogue and collections in the Lothal Museum suggest that bangles (and other jewelry, such as beads) may originally have been the objects most frequently made from copper in the Indus. Copper bangles and bangle fragments are a common feature of Indus metalwork assemblages, although they are rare elsewhere. Outside of the Indus, pins are very common, and the situation is reversed in the Indus, where they are outnumbered by bangles.
• The known corpus of Indus metalwork is ahnost totally lacking in vessels clearly associated with liquids and drinking; whereas they are common across much of West Asia.
• Tool/weapons are found in equally high proportions across all the domestic contexts considered. The paucity of metal weapons in the Indus (an argument for the lack or warfare) is an interpretation which cannot be upheld in light of comparative data.
• Although Indus tool/weapons are all technologically very simple, Indus designs correspond to types commonly found all over West Asia. The recurring statement that Indus weapons would have been too flimsy for use does not stand up to scrutiny.
• There is a clear qualitative and quantitative difference between the metalwork deriving from funerary and domestic contexts in West Asia, highlighting the importance of selecting contextually similar material to a rigorous comparative approach.
• More copper objects contain appreciable levels of tin than arsenic in the Indus, a reversal of the situation in most of West Asia.
• The types of object from each area most frequently containing tin, arsenic or lead are very similar; typically including axes, spears, daggers, bangles (in the Indus), pins (in West Asia), vessels, chisels and burins.
• The fact that bangles are among the objects most frequently containing high levels of tin in the Indus suggests that bronze was a high status material and played a part in signaling socioeconomic standing.
• There is little evidence at present to suggest any centralised storage and/or ownership of metalwork in the Indus. Evidence for centralized production is equally poor, but survey work at Mesopotamian sites such as Mashkan-shapir illustrates the difficulties in recognising centralised control of production from surface survey data alone.

The Extent of Social Differentiation and Stratification: The evidence for social differentiation and stratification in the Harappan society, as reviewed in the above, may be perfectly valid and the conclusion drawn just quite logical, but doubts have been expressed about the extent of social stratification of the Harappan polity. We must, therefore, take a note of this critique, albeit without altering our essential visualization of the Harappan society as a highly complex and socially differentiated and probably stratified society.

To start with, the evidence for the distribution of ‘prestige goods’ is very unclear. Sarcina, for example, commenting on the distribution of artifacts in the homes at Mohenjo-daro, concludes that “.... the quality of found objects suggests a well-distributed welfare and a comfortable standard of living, devoid of either luxury, on the one hand, or evident signs of exploitation on the other” (21). Even, a large house at Mohenjo-daro Lower Town is replete with finds of minor ornaments, terracotta toys, pottery, and simple copper tools as a relatively smaller house in the same area. Similarly, no material difference was found in artifacts found in the citadel and the Lower Town. Similar artifacts are found throughout the site. In short, there is very much uniformity in the kind of material which possibly could indicate the lack of stark social differentiation.

Sarcina's work on the lower town is complemented by the study by Fentress of the comparative proportions of metal, which might be considered as having luxury connotations; and the result show that they are not more common on the Harappan high mound than on the lower town. In fact, the evidence shows a much *lower* proportion of such objects in the citadel area than in the lower town. Additionally, artifacts from public buildings are of much the same type as those from ordinary residences of the lower town.

In his lengthy paper, *Ideology and the Harappan Civilization,* Miller (46) noted that there was a distinct lack of architectural decoration and that house forms were relatively homogenous. In fact, he identified a lack of evidence for any change in almost every artifactual form for the entire span of the Mature Indus Civilization, indicating, again, a lack of increasing differentiation with time.

The burial evidence from the Harappan Civilization is extremely sparse. Overall there is quite a variety of burial practices including extended skeletons in graves which may be brick lined, urn burials, and deposits that look like graves but contain no skeletons within therm. In general, however, the grave goods are simple pottery forms, such as receptacles for meals for the deceased, and there is again no evidence for luxury goods or strong status markers, especially when compared to other ancient civilizations.

If there is little material evidence for social stratification in the Harappan society, then how were the Indus cities 'governed'? Or, there was indeed a social strtatification but the criteria of stratification was non-materialistic, unable to be detected from the archaeological remains?

According to Daniel Miller (46) and some others, it seems likely that the people of the Harappan who may be said to have power may not have enjoyed privileged wealth or conspicuous consumption, and indeed were more likely to have been conspicuous through ritual purity. In his opinion, the so-called "barracks" at Harappa may be more likely to have contained monks than slaves. In such a culture there is a gradation from the formalized abstraction of the guiding principles and values through the direct involvement in the everyday world. It is those who can maintain the greatest distance from ordinary enterprise and who can embody the cultural capital necessary for an authoritarian stance in relation to the interpretation of the mythological "texts" (which may have been oral in form) who are thereby granted an authority and power that is literally consecrated. According to Daniel Miller, a normative tendency to Puritanism seems a closer approximation to the evidence than a Mesopotamian model of priests and priest kings. There is no reason why either the complex bureaucracy which must have existed or the use of the major ritual forms need be restricted to a separate and marked class or group. Control may have been the more effective through being highly dispersed.

If, as seems likely, symbolic capital could not be translated into economic capital, then wherever hierarchy and division manifested itself, this may not have been able to surface as the kind of material representation which is the archaeologist's form of direct evidence for social relations. Clearly, then, lack of any material representation of class or hierarchy does not of itself mean that these did not exist (6).

Summary: In the introduction, a broad overview was presented of the way in which the Indus Civilization is portrayed in popular literature and the work of many current researchers. This interpretation, which was characterized as the 'alternative hypothesis' based upon the current trend to depict the Indus as not conforming to standard models of early complex societies, is a conglomeration of many discrete positions taken by Indus scholars on disparate subjects. The

'alternative hypothesis' thus presented cannot be said to directly match the opinions of any one researcher, although it is clearly adopted by many scholars. To recapitulate, it was suggested that the 'alternative paradigm' model portrays an urban society with a substantial rural component, comprised of numerous villages and smaller sites. There is serious doubt as to the nature and level of sociopolitical organization, and it is common to propose that it was sub-state level or a 'non-state'. There is an absence of clear evidence for authoritarian institutions or groups, analogous to those in contemporary Egypt and Mesopotamia, including evidence such as the physical remains of palaces and temples, and the conspicuous consumption of exotic materials and goods that one might expect from an elite group. There is little evidence for warfare. Religion and ideology are often discussed as a means of explaining social coercion in the absence of warfare, the apparent absence of conspicuous consumption and other displays of wealth and status. Most significantly, it is generally believed that the Indus may have been a society with significantly less social stratification than other contemporary societies. Furthermore, the inception of this interpretation can be traced, broadly, to the early work of Fairservis. Other scholars have reinforced this paradigm by drawing comparisons between archaeological data from the Indus and that of contemporary West Asian societies, and showing that Indus society was organizationally in almost bipolar contrast to its contemporaries, a perception which forms the main line of reasoning behind the 'alternative paradigm'.

This conceptualization has been challenged by other scholars, such as Ratnagar, McIntosh, Cork, and Allchins on various grounds, offering contradictory evidence from Mohenjo-daro, Harappa, Allahdino, and other sites. The crux of these arguments is that the Harappan society was indeed differentiated and to a large extent hierarchical.

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Chapter I.4.

Harappan State?



So far the discussions on the social structure of the Harappan society essentially revolved around the question: Was it a differentiated and stratified society akin to Mesopotamia, Egypt, and other early civilization or was it an egalitarian society with little social stratification akin to a

non-urban, village-like, society. Furthermore, if the Harappan society was indeed a complex society at the level of Mesopotamia and Egypt, and if the absence of social stratification is acceded to, then how did it function? Does it points to a unique social arrangement, not observable in any other Bronze Age civilization? Closely related to this discussion is the question of political organization of the Harappan Civilization. Was it a centrally organized territorial state; was it a commonwealth of city-states; or was it a stateless agropastoral society?

In recent years the debate has largely crystallized around the theoretical question: was the Harappan a 'state-level' society or was it a stateless society. In this context, when we talk about the organizational nature of the Harappan society, we do not generally enquire about the *form* of the state but its capacity and possible existence. The state itself could be a centrally organized territorial state, a regional state, or even a city-state. Similarly, when we talk about a stateless society, we are in fact talking about any form of fiefdom or chiefdom, largely based on kin-relationships. These stateless entities are the hallmark of argopastoral societies and are generally, but not always, precursors of state-level enterprises. Since the debate has been raging for such a long time in the idiom of centrally organized territorial state, city-states, and argo-pastoral amorphous societies, however, we have chosen to follow the debate on the well-traveled path. It is somehow more convenient.

In this chapter and the next we shall be discussing the Harappan society in terms of two alternatives, that is, a centrally organized territorial state or a commonwealth of city-states. But, it should be kept in mind that on theoretical grounds there is no fundamental difference between the two. A stateless society, to be discussed in the last chapter, is fundamentally different on theoretical as well as empirical grounds.

A large number of archaeologists explicitly or implicitly believe that a unified Harappan state and a concomitant central authority existed in the area covered by the Harappan Civilization. According to these opinions, the evolution of urban centers throughout the Indus Valley and their sustenance over a long period of time itself makes the development of a central authority a practical imperative.

In this chapter we shall examine the arguments in favor of the Harappan state - a territorial, centrally organized one - leaving the advocacy for city-states and statelessness to the next two chapters. The discussion here will take into account the nature of a political structure that resembles a centralized state, its theoretical underpinning, its emergence, its means of exerting power and influence, and the archaeological evidence for such a form of political organization. By political organization is here meant the arrangement of elements of a cultural system relating to, among other things, the exercise of power, group leadership, decision-making, social control of behavior, and relations with other groups. Chapter I.1. focused on this subject in generalities, this chapter deals it in context with the Harappan society.

As previously mentioned, Piggott described the Harappan cities as “monotonous rigid regularity of blocks after blocks of brick houses, with broad main streets (drains, etc.); varying buildings with high technical and architectural standards. All these features continue in their materials and techniques unchanged for several centuries.” (1). He then argued that such a ‘rigid regularity’ could not have been achieved without a ‘rigid’ central authority. This correlation produced the idea in Harappan archaeology that there must have existed a central authority, probably a ‘Priest-King’ who directed the affairs of the city or the state, ensured the standardization of artifacts, procured the hard-to-get raw materials, and directed the long-distance trade. This view was originally offered by John Marshall and later supported by Wheeler (2), and still later by so many others.

Piggott's view of the Indus Civilization as under "rigorously authoritarian rule" or a "strong system of centralized government", with a "rigid and highly evolved bureaucratic machine" reflected archaeological findings characterized by: (a) a striking uniformity of both functional and stylistic material traits, including uniform systems of notation, standardized systems of weight (and probably that of measurement), and a common style of architecture, through half a millennium of time and across an expanse of some one million sq. kilometers;

(b) a hierarchy of settlement in which two urban centers stood out in bold relief against scores of much smaller sites;

(c) a degree of apparent urban planning in the two cities and other settlements unprecedented in the ancient world up to that time; and

(d) monumental public works implying a highly organized and specialized labor force, including the construction of elevated areas of specialized function (3)

These views have seen considerable change in recent years but a belief in a centrally organized

Harappan state still persists; the debate is: how this state was organized and how did it function. Archaeology plays a pivotal role in this debate.

The formation of the early state in South Asia is relatively a new subject of research and most of the work done so far comes in reference to the rise of petty kingdoms of the Vedic Aryans and the Aryanized Indus tribes in the general area of northern Punjab and the Indo-Gangetic Divide. Little work is at hand that touches upon the state formation in the Indus Civilization during its mature phase. We are therefore constrained to refer to the vast amount of theoretical work that has been conducted in reference to the rise of early states in the Near East and elsewhere for which much more is known. These theoretical considerations are quite useful in examining the situation in the Indus Valley during the Harappan period, although they open up new areas of deliberation and give rise to new questions. Since some aspects of state formation in early civilizations have already been discussed in Chapter I.1., some degree of repetition is unavoidable.

TERRITORIAL STATE IN EARLY CIVILIZATIONS

Early States: The state has generally been envisioned as a form of political organization with a centralized leadership and economy, and a hierarchically ranked social system. By ‘state’ we generally mean a political structure that is steered by a central authority and that which covers a geographically defined area. Anthropologist Robert Carneiro defines the state as "an autonomous political unit, encompassing many communities within its territory and having a centralized government with the power to collect taxes, draft men for work or war, and decree and enforce laws" (4). The state has a qualitatively different social structure than chiefdom or any other type of non-urban sociopolitical structure, described previously.

Territorial states developed at early stages in the evolution of social, economic, and cultural complexity in many regions of the ancient world. Most of the early states quickly disintegrated into smaller states, but some of them became the focus for the development of civilizations marked by distinctive political and economic institutions and by a sharply demarcated upper-class lifestyle. These territorial states had to construct elaborate administrative hierarchies which were subject to a considerable degree of centralized control. Sometimes there was a close correlation between a single territorial state and a distinctive civilization, especially where the state had sharply defined ecological boundaries, as was the case with Egypt or the Andean highland core of the Inca kingdom. Where there were no clear ecological boundaries, however, it was possible for several coexisting territorial states to have generally similar cultures. This appears to have been the case in northern China.

Wright and Johnson (5) were among the first to specify archaeological attributes of early states. These include a four-tiered settlement hierarchy, reflecting a three-tiered administrative system; the presence of "administrative artifacts," i.e., commodity and message seals; and public buildings of no apparent religious function. To this list Isbell and Schreiber (6) append the criterion of evidence for a viable, long-range communications network and distribution system.

Redman (7) summarizes the views of many anthropologists on the key distinguishing factors of state-level organization as:
1) concentration of economic power;
2) organization along political and territorial lines; 3) hierarchical and differential access to basic resources; and

4) monopoly of force.

In contrast with simpler forms of political organization, such as chiefdom, state-level societies have centralized bureaucracies, composed of full-time administrative specialists who have the power to enforce decisions of a central government and to prevent fissioning (8). Carneiro (9) declares that this power was exercised typically by states to "draft men for war or work, levy and collect taxes, and enforce laws." From these basic powers flow many of the other distinctive attributes of a state, which may vary from one society to another. These traits include standing armies, notational systems, methods of keeping accounts, taxation and/or tribute, three- or more-tiered administrative hierarchies, populations well into six figures, territorial and occupational rather than kin-based social organizations, cities, courts of law, stratified or class societies marked by unequal access to the means of production and to the goods, necessities and luxuries available to the society, market systems, hierarchical, anthropomorphic pantheons, and support of a wide range of occupational specialists ranging from full-time priests to scribes to artisans to philosophers, architects, and artists (3).

The moral authority and sacred aura of the center not only are essential in maintaining complex societies and state, but were crucial in their emergence. One central impediment to the development of complexity in stateless societies was the need that it integrates many localized, autonomous units, which would each have their own peculiar interests, feuds, and jealousies. A ruler drawn from any one of these units is automatically suspect by the others, who rightly fear favoritism toward his/her natal group and locality, particularly in dispute resolution. The solution to this structural limitation was to explicitly link leadership in early complex societies to the supernatural. When a leader is imbued with an aura of sacred neutrality, his identification with natal group and territory can be superseded by ritually sanctioned authority which rises above purely local concerns. An early complex society is likely to have an avowedly sacred basis of legitimacy, in which disparate, formerly independent groups are united by an overarching level of shared ideology, symbols, and cosmology.

Supernatural sanctions are then a response to the stresses of change from a kin-based society to a class-structured one. They may be necessitated in part by an ineffective concentration of coercive force in emerging complex societies. Sacred legitimization provides a binding framework until real vehicles of power have been consolidated. Once this has been achieved the need for religious integration declines, and indeed conflict between secular and sacred authorities may thereafter ensue.Yet as noted, the sacred aura of the center never disappears, not even in contemporary secular governments and astute politicians have always exploited this fact. It is a critical element in the maintenance of legitimacy.

Despite the undoubted power of supernatural legitimization, support for leadership must also have a genuine material basis. Easton suggests that legitimacy declines mainly under conditions of what he calls 'output failure' (10). Output failure occurs where authorities are unable to meet the demands of the support population, or do not take anticipatory actions to counter adversities. Outputs can be political or material. Output expectations are continuous, and impose on leadership a never-ending need to mobilize resources to maintain support. The attainment and perpetuation of legitimacy thus require more than the manipulation of ideological symbols. They require the assessment and commitment of real resources, at satisfactory levels, and are a genuine cost that any complex society must bear. Legitimacy is a recurrent factor in the modern study of the nature of complex societies, and is pertinent to understanding their collapse

Quite a few early states have been studied by a diverse array of archaeologists, anthropologists, and other social scientists during the past half a century; the Nile Valley Egyptian state, Shang Dynasty of China, and the Inca states arising in the Americas have been studied extensively and several excellent books have been written summarizing the salient features of the individual civilizations and states. We take advantage of these comparative studies, especially those of Bruce Trigger (11) and Maisels (12).

Egypt is one primary example of an early territorial state. In the centuries preceding the political unification of Egypt, a series of chiefdoms or small early states developed in the northern part of the Nile Valley. During the Late Pre-dynastic period, Egyptian society was characterized by increasing social stratification, economic expansion, and trade as well as by the development of rituals that would later play an important role in Egyptian kingship. These early states, with their capitals about twenty-five kilometers apart, probably resembled in many respects the citystates that had begun to develop in Mesopotamia in the Early Uruk period. Around 3100 B.C., however, the rulers of one of the major centers in southern Egypt, brought the whole of Egypt under their rule; a network of competing early states was replaced by a centralized government which divided Egypt into a series of provinces for purposes of local administration. Some unilinear evolutionists have described the later Egyptian provinces as continuations of Pre-dynastic city-states, but to call them city-states either before or after unification is misleading. Many provinces were created as administrative units long after Egypt had become a territorial state, and the older ones were thoroughly transformed by the imposition on them of a higher-level bureaucratic administration (11).

If local ruling families survived unification, they were soon dissociated from their old territorial power bases and absorbed into the national upper classes. By Old Kingdom times it was normal for officials to hold offices sequentially in different parts of the country, with the highest positions to which they aspired being at the royal court. The only offices that may have remained hereditary were those of village chiefs. The royal court became the focus for the development of elaborate art, monumental architecture, literacy, and the distinctive behavioral patterns that characterized the Egyptian ruling classes. A common language appears to have been spoken throughout Egypt prior to unification, and this probably made it easier to promote a sense of national identity.

In the Andean region, chiefdoms and small states had developed along the Pacific seaboard by at least the second millennium B.C. and in the highlands somewhat later. More elaborate states were associated with the Moche civilization that flourished along the north coast of Peru during the first millennium A.D. The Chimu kingdom, which was centered in the Moche Valley, beginning in the fourteenth century A.D. controlled most of the north coast of Peru until it was conquered by the Inca in the 1460s. In the highlands, territorial states appear to have been established around centers at Tiwanaku and Wari between A.D. 600 and 1000. These states are believed to have sought to control mainly key resource areas and may not have been as complexly organized as the Chimu kingdom (11).

When the Inca state developed, probably in the early fifteenth century, there appear to have been no societies at more than the chiefdom level in the Cuzco area or the central highlands of Peru. The Inca may have drawn on surviving remnants of Wari administrative practices, such as their revenue system, and on Chimu metallurgical technology and political skills. Their stonework appears to have been inspired by ancient stone buildings that Inca rulers had seen in the Tiwanaku area. The Inca imposed their administrative system over 984,000 square kilometers and perhaps eight to twelve million people who lived in pockets of arable land separated by mountains and deserts. They also

created a new style of monumental architecture, which, while highly distinctive and imposing, displays ample evidence of its derivation from traditional rural houses. In addition, they introduced their own dismissive style of urban planning. While the central highland core of the Inca state, between Ecuador and Lake Titicaca, bears the strong imprint of Inca culture, Inca cultural influence was less intrusive in coastal regions of Peru, where the highly elaborated forms associated with older cultures persisted, and in the far south, where only relatively simple facilities were installed to exploit the mineral resources of thinly populated regions (11).

The Inca rulers divided the territories they conquered into more than eighty provinces, ruled by Inca governors. To produce approximately standard-sized provinces, they artificially combined small political groupings and divided larger states, including the Chimu kingdom, into smaller units. It was not difficult to dismantle most large states, since chiefdoms that had been recently incorporated into them had often preserved their sense of identity and were happy to be liberated.

In China, by the third millennium B.C. various Lungshanoid cultures of the Yellow River Valley were characterized by wheel-made pottery, increasing economic and political inequality, warfare, and the-development of ritual practices such as human sacrifice and scapulimancy. Numerous towns surrounded by stamped earth walls appear to have dominated smaller settlements spread across areas of several hundred square kilometers. None of these towns exceeded twenty hectares. This suggests the development of complex chiefdoms or incipient states such as those of Pre-dynastic Egypt or Early Uruk-period Mesopotamia. Such entities may have had the potential to develop in the direction of either one or more territorial states or a city-state system. There is no evidence of royal palaces until the Erlitou phase (2100-1800 B.C.), which has been identified with either the Xia or the early Shang Dynasty of recorded Chinese history. The oldest known bronze vessels date from this period (11).

The cultural development of the central plain was significantly influenced by developments occurring to the North, East, and South. During the Erligang period, contemporary with the Shang occupation of Zhengzhou, a uniform style of bronze casting spread from the central plain over a huge area of northern and central China and apparently well beyond the borders of any one territorial or city-state. By the late Shang period, bronze industries very different from those of the central plain had developed in the Middle Yangzi region, Sichuan, and other parts of China.The Shang state has traditionally been described as a territorial state that had imposed its rule over the chiefdoms and small states of the central plain, but some scholars believe it to have been a city-state that had managed to subdue and extract tribute from a large number of adjacent city-states or a voluntary federation of citystates. It is possible that the frequent relocations of capitals ascribed to the Xia and early Shang Dynasties may be a later attempt to construe as a single, linear succession of various rulers who had held power simultaneously. There is, however, substantial evidence that the Shang kingdom was a territorial state that controlled about 230,000 square kilometers (11).

It appears that, as new areas were incorporated, there was a tendency to appoint members of the Shang royal clan and other leading Shang families to rule over them. Populations from the border areas were resettled in newly acquired territories. The establishment of garrison settlements among non-Shang peoples accords with a policy of policing and defending the borders of a territorial state. Settlement of border areas may have promoted the linguistic as well as the cultural assimilation of these areas, resulting in the spread of the Chinese language into regions where it had not previously been spoken.

Evidence that Shang culture extended beyond the known borders of the Shang kingdom does not pose insuperable problems for the notion that it was a territorial state. In late Shang times, the pre-dynastic Zhou rulers in the Wei Valley were sometimes subject to the Shang kings and sometimes independent of them. They appear to have derived much of their upper-class material culture from the Shang state and to have emulated the Shang rulers in many ways. It was later reported that writing was introduced to the Zhou court when Shang diviners defected there. Of the few sites that have yielded inscribed oracle bones, all appear to have been associated with the Shang and Zhou royal families (11).

On the evidence from the early civilizations of Egypt, northern China, and the Inca, it is possible to identify features that territorial states had in common and that distinguished them from citystates and non-states. First, the total areas controlled by territorial states tended to be larger than those occupied by city-state system. The Valley of Mexico, which was geographically and culturally distinct from other areas occupied by city-states in highland Mexico, enclosed some 7,000 square kilometers. Southern Mesoptamia, including both settled areas (never more than 12,000 square kilometers) and adjacent winter grasslands, covered about 120,000 square kilometers, while the Yoruba state in west Africa, together with Benin, occupied about 130,000 square kilometers. The lowland Maya city-states were spread over 250,000 square kilometers, although most of the Classic Maya ones were concentrated in the southern half of that area. In contrast, Old and Middle Kingdom Egypt controlled and utilized an area of about 333,000 square kilometers, of which only 19,000 square kilometers were not desert. The Shang state at its maximum may have controlled 320,000 square kilometers mainly of rich farmland, but its core was perhaps as small as 132,000 square kilometers. Finally, the Inca kingdom embraced 980,000 square kilometers, most of which was uncultivable desert, bare rock, or cold altiplano. Territorial states were able more effectively to control and exploit nonagricultural land than were city-states (11). Finally, the Harappan state (if it was a state) was in access of one million square kilometers, the largest of any one early states.

Second, the cities of territorial states were considerably less populous than those of citystates. Territorial states were held together by an upper class whose top stratum consisted of the royal family and the leading families of the core group that had created and governed the state. Lower-ranking functionaries were recruited from less prestigious members of the core group and by co-opting high-ranking members of conquered peoples. These rulers and officials, together with their retainers and craft workers, constituted the entire population of urban centers. Because the central government maintained order and defended the frontiers from external attack, there was no need for farmer to seek protection there. There is also evidence that the upper classes sought to isolate themselves geographically from farmers and the lower classes generally (11). There are indications, although disputed, that the Harppans of higher social stature lived in separate quarters which were walled. There are also indications that some other groups of residents also lived in separate locations of the city, sometimes walled, although these groups do not seem to be any wealthier or poorer than the rest.

Third, the rulers of territorial states had at their disposal much larger surpluses than did those of city-states and were therefore able to create works of art and architecture on a more massive scale. Egypt's Great Pyramid was the largest single construction of the preindustrial era. The Inca erected elaborate stone building complexes at important provincial centers throughout the twenty-four-hundred kilometer-long core of their state. The Shang constructed massive, stamped-earth enclosure walls around royal residential complexes, as well as large palaces. Highly skilled and specialized artisans attached to the royal court crafted magnificent luxury goods and symbols of authority - bronze vessels in China, stone vessels and funerary sculpture among the Egyptians, luxurious cloth and

ornaments made of precious metals in Peru. Everywhere luxury goods included valuable items of personal adornment. A monarch was able to derive great prestige and reinforce loyalty by bestowing such gifts on his relatives and officials (11). Harappan rulers do not offer such an evidence although there are a few public buildings, such as the Great Bath of Mohenjo-daro, artificially raised platforms, and massive city walls, that can be cited as the manifestation of stately grandeur.

Fourth, in territorial states the exercise of royal power required maintaining a considerable degree of centralized control over the economy. This included accumulating the surpluses required to support the upper classes, administration, army, and major construction projects and the production and distribution of the luxury goods that helped to ensure the loyalty of the king's supporters. The size of territorial states necessarily made central political control indirect, and therefore it could be challenged or subverted more easily than in city-states. The Inca and Egyptian rulers controlled foreign trade as well as all major mining and quarrying projects. While bronze tools were manufactured in Inca provincial centers, gold objects could not be transported away from the Cuzco area without official authorization. The central government also guarded the borders of the kingdom not only against foreign attack but also to stop dissidents from escaping and to control trade. The Inca, the Egyptian, and possibly the Chinese and the Harappan rulers fortified the borders of their kingdoms to control movement across them. In the early period of the Egyptian state its rulers also depopulated the regions lying immediately beyond their southern, eastern, and western borders, apparently resettling many of the foreign peoples who had lived in these regions in Egypt. The control of borders 'caged' the subject populations of early civilizations and made them easier to control. In the area covered by the Harappan Civilization, we do not detect such a tendency.

Fifth, there was much more continuity in Civilization is mixed but in general the access to agricultural life in territorial states. There is ar chaeological evidence that the unification of Egypt was accompanied by significant changes in set tlement patterns, including the relocation of many small communities. Some of this relocation may have occurred spontaneously as a response to the greater security that followed unification; farm ing populations that had clustered around major centers, such as Hierakonpolis, may have dis persed, and many farmers may have moved, or been shifted north as the Memphis area became administratively important and the hitherto sparsely populated western Delta was developed. In highland Peru the Inca rulers ordered popula tions living in fortified communities on mountain tops to resettle in smaller, open settlements at lower altitudes and near better agricultural land. There is also evidence of farming groups being resettled in Shang and Zhou China as new lands became available. Because farmers continued to live in villages and close to the land they worked, however, they remained economically self sufficient to a much greater degree and probably

preserved the traditions of pre-state village life to a much greater extent than urban-dwelling farm ers in city-states and had less opportunity to de velop a desire for goods manufactured in urban centers. While farmers were fully occupied with agricultural tasks during the sowing and harvest seasons, they could use the less busy intervening periods to manufacture the goods they needed (11).

'luxury goods' were almost the same in the cities and villages. For example, the availability and distribution of manufactured goods at the small site of Allahdino was similar to that in the much larger settlement of Mohenjo-daro.

The State in the Indus Valley: As stated earlier, the Hardpans, like many other early civilizations, are primarily known by their pottery, the types of houses they lived in and the food that they ate. The development of their social and material culture can be traced by tracing the development of specific artifact types and distribution of these artifacts across space (13). The material remains also give us clues to the social structure, political organization, and religious leanings of their authors. However, these are clues only; the archaeological record of this civilization must be compared with the features and processes of urbanism and state formation of other early civilizations, such as those described above, to reach some logical conclusions.

Furthermore, as there is little direct evidence for many of the deeper institutional configurations of this ancient cultural system, the inferences from many diverse remains need to be made to reconstruct a convincing picture of the level and character of the Harappan sociopolitical system. For example, the size and architectural complexity of Mohenjo-daro and Harappa obviously mean something in terms of a measurement of sociocultural development. The layout of the streets, the presence of a large-scale drainage

As a result, in territorial states there was a much larger economic gap between the upper classes and farmers. The upper classes used goods that were made by highly skilled, full-time artisans, often from valuable, imported materials. The rural population continued to use goods that part-time craft workers manufactured from tradi tional, locally available materials. These products were exchanged at local markets. The main eco nomic transfers between farmers and the upper classes were the taxes and rents that farmers paid to the government and to landlords. Farmers had few reasons to visit urban centers or means to obtain luxury goods, except as rewards and gifts from officials and upper-class patrons. They also had less accustomed to new technologies than farmers in city states. Agricultural tasks were performed using wood and stone tools, although

artisans who worked for the government were supplied with metal tools. By contrast, among the Yoruba and the Mesopotamians metal farming implements became common at approximately the same time that metal tools became available to full-time craftworkers. It would also appear that, because in territorial states urban centers were smaller, farmers did not have the incentive to practice intensive agriculture in their vicinity that they did around major urban centers in city-state systems (11). The evidence from the Harappan system with its requirement for constant tending, the monumental 'citadels', all can be taken as an indication for strong central government. This is the very kind of thing the state or differentiated, specialized organization would be expected to produce. Similarly, the presence of writing was, and still is, taken to indicate a level of organization appropriate to the label 'civilization' and often for a state-level organization.

The argument for an Harappan state rests mainly on a homogenous material culture over a large geographic area, the provision of a uniform system of recording (the script) and the common system of weight and measurement, the provision of infrastructure such as a common metal and stone took kit, the lack of regional clusters in animal symbols on steatite seals, the common appearance of the unicorn symbol on seals, the establishment of settlements at specific loci for particular purposes (like craft centers or for the procurement of raw materials) and the evenness of large urban centers distributed over the map (Mohenjo-daro, Ganweriwala, and Harappa forming an equidistance triangle). If we take into account the site of Lothal in Gujarat and that of Kalibangan in the Divide, it adds another dimension to the same type of settlement pattern

The literature on the formation and sustenance of the Harappan state (or its absence) is not substantial. A lot has been written on the Harappan Civilization, and some of it delves, although briefly and rather superficially, in the matter of the Harappen state that kept the civilization intact for such a long time. Although Harappan archaeology began almost a century ago, few attempts have so far been made to ask what kind of economic and political linkages ordered the relations between communities to form into what is described as the Harappan Civilization and state. Most suggestions about the nature of the Harappan polity and economy have been offered as passing observations rather than the end

[Indus Civilization was] "more village-like than city-like"
Walter Fairservis, in The Roots of Ancient India, 1971

"....... one may invert Fairservis' statement and suggest that to some extent, the civilization may have been "more city-like than villagelike"

Jerome Jacobson in Ref. 4

Indus Civilization must be borne in mind. First, one must be keenly aware of the depth of control. The way towns were planned, with straight roads, walled citadels and lower towns, and the way building encroachments were prevented and road drains were maintained, show a remarkable degree of administrative control in major Indus towns for a period of about 500 years or even more.

Second, a similar control over villages surrounding the cities must be indirectly inferred from the size of the towns. Without the imposition of rigorous control over peasants, and the extraction of a large part of their surplus produce in the form of tax or tribute, it is not imaginable how the towns could have been fed and clothed.

Third, irrespective of how one looks at it, an institutional uniformity, which could have apparently emerged only from centralized control, is glaringly evident. As shown in Volume III (*Harappan Civilization - The Material Culture*) of this series (15), such uniformities are seen in the common features of town-planning; the common Indus script and iconography, and uniform system of weights; the use of distinctive seals; a universal style in pottery; and standard sizes of bricks. After these practices or cultural traits arose in one part of the Indus basin, around 2600 BC, they spread over the whole Indus basin within a century or so. They even spilled over into Indo-Gangetic Divide and beyond in Kutch.

Probably, the most important is the realization that it does not make any sense to categorize archaeological periods of the Indus Age as blocks in a sociological evolutionary scale, as described in the preceding chapters: the Harappan period may in fact have seen the gradual change from social ranking based on kinship and genealogical relations to a system in which power was based on economic privilege and probably a legitimate use of force. Ranked societies and state systems need not be viewed as watertight compartments, and kinship networks, for example, are probably quite important in inchohate states. Neither does the term ‘the Harappan state’ imply that there was necessarily one monolithic state apparatus in equal control of all parts of the Harappan realm. What is important is that the Harappan period follows on the Early Indus period not as more of the same but with a radically altered form of social and political organization.

SIGNPOSTS OF THE HARAPPAN STATE

There are several signposts that have been pointed to as indicative of the existence of a centralized state in the Indus Valley during the Mature Harappan phase. These traits and attributes relate to population size and distribution; social product of sustained research. There are a few brief remarks of Marshall, Mackay and Piggott, referred to above and to be discussed in these pages. There is the commentary of Walter Fairservis, Jim Shaffer, B.B. Lal, S.P Gupta, and Possehl, but no particularly reasoned discussion on the topic and no focused attempt to establish a clear inference for the existence (or nonexistence) of a state (or several states) during the Harappan Civilization. Shereen Ratnagar (14) and Jerome Jacobson (3) are probably the only ones who seriously discussed the formation of the Harappan state and suggested its possible organization. Kenoyer, who wrote so extensively on the Harappan technology, trade and exchange, artifactual distribution, etc, implicitly assumes the organization of the Harappan society as a centralized state (although without defining this state) and proceeds to offer the archaeological evidence for economic stratification which is an essential component of the early state. The following treatment is largely based on the extracts from these excellent essays.

Urbanization is not possible without the extraction and reallocation of the agricultural ‘surplus’ and this requires extractive and redistribute institutions, which, in turn, promote the growth of a centralized authority. A central authority in Harappan society must also be a necessity for the long term cultural growth, development of trade, securing of trade routes, standardization of weights and measures, etc., for which we have a

great deal of evidence over a wide area.

In order to understand the nature of the stratification; urbanization; centralized bureau

Indus state or states, three major features of the
cratic administration; police power; a market economy; taxation; an effective long-distance communications system; homogeneity of cultural material over a large geographical area, and the existence of a probable script. The archaeological basis of these pointers have already been discussed in Volume III (*the Material Culture*) in great details: others have been touched upon in one of the preceding chapters of this volume. The material presented in the followings should be considered as complementary. The preponderance of this evidence apparently support the contention that the oldest civilization in South Asia and the most extensive of the world's early civilizations was a territorial state.

Urbanization: Notwithstanding a few dissenting voices, it is given that the Harappan Civilization was an urban society, that is, at strategic locations about half a dozen cities and probably an equal number of towns developed, which were economically supported by a much larger number of agricultural villages and pastoral camps which surrounded the individual cities and towns. We know from excavations that Harappans lived in densely packed neighborhoods and engaged in diverse occupations. The emergence of cities and the economic change towards specialization reflected the division of labor in the society. As specialization proceeded, the spatial character of the economy changed, with certain types of production becoming concentrated at particular settlements. This diversity of settlement and occupation had important social, economic, and political dimensions and the growth of the Harappan Civilization simply reflected these changes in social differentiation and functionally integrated specialization (14).

Indus urbanism is defined on the basis of several criteria, the most important of which is the pattern of settlement. A few large cities, which may have held between 40,000 to 80,000 people, surrounded by an irregular network of smaller towns, villages, hamlets and temporary camps of pastoral communities, emerged over a large geographical area. Some of them, such as Mohenjodaro and Harappa, were built with baked brick, while Dholavira in Gujarat and those on the Makran coast were constructed extensively with shaped and un-worked stone, combined with mud brick. Smaller satellite settlements were generally built with mud brick. Most Indus settlements had north-south and east-west oriented streets with brick lined drains for disposal of wastewater. Almost all Harappan cities and towns had multiple walled residential sectors, one of which, (designated as 'citadel') was higher than the others. As noted earlier, three largest cities, Mohenjo-daro, Harappa, and unexcavated Ganweriwala, were equidistance from each other, forming a triangle. This regional pattern is reinforced if we include the two other, but smaller, cities i.e. Lothal in Kutch and Kalibangan in the Divide. All these cities were located at long distances of each other - on the order of 500 kilometers. This pattern contrasts with that of Mesopotamia, where cities were located very close to each other, not more than 15-20 kilometers.

Closely connected to the organization of the Harappan society into towns and cities is the question how these urban centers related to the rural economy that apparently sustained this civilization through their activities in food production. Furthermore, we wonder if these agricultural villages were intimately integrated with the central economy of the land or if they existed merely as groups of agricultural settlements unconnected with the urban islands existing in their midst. And then, there is the question: Are we sure that the whole population of the Greater Indus Valley consisted of urban

centers surrounded by a much larger population of agricultural settlements?

The settlement pattern in the Harappan Civilization does not conform to other state-level societies in early civilizations. Based on comparative data, it is generally believed that the statelevel societies consist of three-tiered settlement pattern: a major city, surrounded by smaller towns and agricultural villages. No such pattern has been detected in the Harappan Civilization. The settlement pattern in Cholistan seems to be different from the rest but this area has not yet been explored sufficiently as to reach a definite conclusion. On the basis of these observations, many archaeologists have come to the conclusion that the Harappan cities existed as isolated settlements and the society at large was, as Fairservis opined, was "more villagelike than citylike" (17). This means that the Harappan Civilization was not a state after all.

Another peculiarity of the Indus Civilization is that there was no sharp cultural dichotomy separating the large urban centers and smaller, presumably rural, settlements. For example, in comparing Allahdino (a tiny settlement) with Mohenjo-daro (a very large city), Shaffer (16) pointed out that "all of the essential characteristics of the urban center [Mohenjo-daro] are duplicated at this smaller site [Allahdino]", and that "most objects of material culture found at AIIahdino were manufactured elsewhere. In the same paper Shaffer pointed out that Balakot, another village-size settlement, yielded stamp seals and other evidence of cultural sophistication. In view of this, one may invert Fairservis' statement (17) and suggest that the civilization may have been "more city-like than villagelike" instead of "more villagelike than city-like".

In any event, the presence of at least four or five apparently contemporary major urban centers sharing the same culture complex and providing an ordered urban environment for about 150,000 to 200,000 residents is unknown for any documented "villagelike" or stateless society (3). To explain such a cultural landscape, we must assume that the rural villages must have been altered by the centralizing effects of urbanization. This means that the daily activities of the smaller rural settlements would have been integrated into the overall structure of the dominant urban centers through control over the production and exchange of agricultural goods.

To what extent we can apply this cityfocused model of social organization to the overall Harappan society is a point of conjecture. Perhaps, the change in the nature of agricultural production and exchange over the urbanization period is a useful way to consider the impact of urbanization on the villages. An important point to consider in these studies is how the city-folks extracted the 'surplus' from the surrounding villages to sustain their own non-producing population of artisans and administrative structure.

Social Stratification: All Bronze Age statelevel societies known to us show a high degree of social differentiation.These social strata are stacked over each other in a characteristic manner that is generally specific to each society but in general the social hierarchy was fairly similar in all early civilizations - the people were generally divided into 3 or 4 social classes, the nobles and priests being of the highest rank while the slaves, menial labor, and outcasts being of the lowest. Between the two classes lied the merchants, artisans, and agriculturists, who were internally stratified, depending on civilization to civilization.

Social differentiation and stratification is, therefore, considered perhaps the most important, in fact the most fundamental, criterion for the development of urbanism and the concomitant state. Whether describing the state politically, as a separation between "rulers and ruled" (18) or economically, as

between the producers of the surplus and the consumers of it (19), all recent studies agree that socio-political-economic differentiation in the control of the society and access to its products lies at or near the heart of what distinguishes the state from simpler cultural forms.

As concluded from the discussion in the last chapter, there is a general agreement that the Harappan society was a complex, socially stratified society but the question is often asked: how complex and how stratified? Fairservis saw only the "beginnings" of class structured society in the largest Harappan cities, where he points to the evidence of large population concentrations, massive enclosure walls and dams, suggestive of collective control of considerable labor force, and formal ramped buildings that he associated with "ceremony requiring the special offices of priest or clerk or both" (21). Other archaeologists saw such a social differentiation in Harappan towns in other ways. For instance, the fact that some Harappan settlements show a separation between a Citadel and Lower Town may indicate not only functionally different areas within a settlement but also perhaps a degree of social segregation. Social heterogeneity can also be inferred from the lack of uniformity, although to a limited extent, in house types and sizes. Material culture too indicates differences in consumption. For example, long carnelian beads appear to have been rare and copied in clay, indicating the stark differentiation between the consumers.

Questions are also asked: What was the nature of social stratification in the Harappan society, what was the process of the emergence of this stratification, and how did it resemble or differed with the other contemporary civilizations. Above all, what is the archaeological evidence. As noted in the last chapter, a definite answer to these questions is not possible but a general picture does emerge as we ponder over the archaeological remains, namely, in the Harappan society we do not detect class differentiation on the basis of wealth, objects of symbolic value, or even differentiated living quarters. The dominance of the ruling hierarchy was probably more political and ideological than economic in character.

This is in consonance with the research work of Skalnik (20), who surveyed 21 early states to emphasize that " it is hardly possible to defend the idea that the early state was based on an accomplished process of class cleavage [and that] the standard of living of the [ruling stratum] did not differ too greatly from that of the common people". Accordingly, the absence in the archaeological record of marked variation in material wealth within the population of an early civilization should not be surprising, and in no way rules out the possibility that the civilization functioned as a state" (3).

Kenoyer describes the political organization of the Harappan society in terms of semiautonomous social groups, in each of which there were patrons and clients organized in hierarchies, and that there were struggles for power within groups and among leaders of groups. The state emerged as part of the process in which these differentiated and stratified social groups were recombined under new kinds of centralized leadership. The nature of these semi-autonomous social groups are, however, not defined. In all likelihood, he probably describes the political order as a ‘heterarchy’, to be touched upon in Chapter I.5.

Cultural and Technological Homogeneity: An overwhelming impression about the Harappan Civilization is that of a sophisticated and highly complex society whose hallmark is cultural as well as technological uniformity, both throughout the several centuries during which the Harappan Civilization flourished, and over the vast area it occupied. It is also characterized by the ‘competent dullness’, or a lack of variety of its crafts. As Allchins (22) have so eloquently described, at one

period, perhaps around 2500 B.C, one might have roamed from Kutch to northern Afghanistan via the Indus plains and found the familiar settlements of the Harappans all thriving contemporaneously wherein the pottery, bangles, seals, weights and measures, town planning, drains, graters, bathing platforms, etc., looked so familiar that it gave the allusion of a static and non-changing society, regulated by an overarching state. The artifacts were duplicated so precisely wherever Harappan settlement occurred that it is often difficult to speculate as to the spatial origin of any particular artifact, place or time when it must have been fabricated. The uniformity of weights and measures, and the common features in agriculture, town planning, art, religion, script and seals, etc., are witness to this general impression. The Allchins also echo the conclusion of most researchers when they state that “It is possible to typify each craft with a single set of examples drawn from one site alone” or, for example, that “a standard range of copper and bronze is recorded in site after site” (22).

This impression of homogeneity results from two complementary factors: the similarity between artifacts at different sites and their predominantly plain form, which also gives an impression of primarily utilitarian concerns. The lack of decoration or particularizing features in the buildings is matched by the metalware, consisting mainly of sheets cut into simple shapes, or made up into container forms, and the chipped stone material dominated by parallel sided blades.The classic Harappan black-on-red ware, which includes both geometric and naturalistic designs, is easily recognizable as a conventional style. The range of seals includes many idiosyncratic designs but uniform in style, nonetheless. The overall impression of homogeneity is enhanced by the spread of uniformity of a range of artifacts, unique to the Harappans. These include from various ornaments to the triangular terracotta ‘cakes’.

We may also note that there was a standardized system of weights. Weights conforming to one system of values have been found at about 22 Harappan sites, large and small. This spread may indicate a network of supervised and controlled exchanges over the entire Harappan area. This is in sharp contrast to Early Dynastic Sumer, where weight systems differed from one city to another till the political unification and administrative centralization under the 3rd Dynasty of Ur, when a uniform system of weights was imposed throughout the realm.

This homogeneity and standardization of crafts as well as urban planning, street widths, brick proportions, and two parallel systems of linear measure and several other cultural markers throughout the vast expanse of the Indus Civilization has been cited as reflective of strong centralized regulations (22) or central administration (1). In this connection, the main analytical framework for Harappan material culture was first established by Piggott (1), who chose to emphasize the uniformity in style and technology definable among such objects as ceramics, metal tools, seals and weights. According to Piggott such uniformity correlates with a ". . . a monotonous regularity of a highly organized community under some strong system of centralized government, controlling production and distribution and no doubt levying a system of tolls and customs throughout the territory under its rule" (1). Piggott felt that this uniformity reflected a basically conservative attitude toward culture change, one reflected in the Harappan culture to such a degree that he felt it had entered a stage of cultural stagnation. Nonetheless, Piggott hypothesized that the manifest cultural homogeneity was the result of a strong hand that governed the state. To this, Wheeler intoned: "Behind so vast a uniformity must lie an administrative and economic discipline, however exercised, of an impressive kind."

However, Shaffer (16) later suggested that without invoking strong central authority, an internal "distribution and communication system" including a trading network could account for the

standardization and uniformity seen in Harappan material culture. Jerome Jacobson (3) countered this argument by saying that “although stylistic traits have been known to diffuse extensively through trade and other cultural mechanisms without centralized control, it is more difficult to accept that traits such as "citadel-lower town" settlement plans and uniform street widths, brick dimensions, weights and measures, and a notational system would have been so widely adopted in the absence of a hierarchical and bureaucratic political apparatus” (3). Shaffer’s quarrel is apparently not with the overall homogeneity of the Harappan culture but its cause, i.e. the existence of a centralized state.

In recent years it has become fashionable to point to the ‘regional differences’, rather than to the overall cultural similarities, thereby disputing the role of any political organization in furthering cultural integration. The cases of cultural differentiation in Kutch, Kuli region, Zhob and Quetta Valley are generally quoted. Judging from their material culture, the people of Kutch and Saurashtra do seem to be different from those of the core areas of the Indus Civilization: this comes through as not just different kinds of pots and other artifacts, but in terms of subsistence, adaptation, and ways of life. Similarly, the Kulli people of South Baluchistan and those of Zhob and Quetta/Pishin Valley of northern Baluchistan stand out in contrast to the Harappans of the riverine plains. They seem not only to be somewhat different from the core area but also from each other. We also see some variations in material culture in the IndoGangetic Divide.

It is clear that almost all of these examples of diversity are from the peripheries rather than from the core area of the civilization. Furthermore, the oft-quoted examples are of Late Harappan or even post-Harappan period rather than of the Mature Harappan period. Thus, notwithstanding the limited regional variation that can be discerned in some of the artifacts, the Harappan Civilization was quite uniform over a large span of time and space, its technological base was rather slow to change, slow to the extent that ‘culturtal stagnation’ readily comes to one’s mind, its ceramics indeed reflected a picture of ’competent dullness’, its architecture only varying in the use of raw material dictated by its availability alone, and its social structure probably fossilized into a state of ‘eternal bliss’.

This state of affairs - the expansive uniformity, the ‘competent dullness’, the extent ‘sameness’ over time and space - bears upon the question of the social and political organization of the Harappan society and has fueled the debate on the political nature of the Indus Civilization. This coherence is worthy of note because it is indicative of integrative forces that kept the norms of craft production together. Was this togetherness a result of a state, governed by a competent administrative system, or due to some other factors, the debate is still alive.

While a homogeneity of the Harappan culture is generally admitted to, opinions differ as to the means or the process of such a homogeneity, namely: was this technological uniformity achieved by the centralization of production and distribution, or whether by some other means. Some archaeologists, such as Piggott, Wheeler, Ratnagar, Jacobson, and probably Kenoyer, think that a centralized organization or a network of centralized control systems was at work. State control has been favored for long but lately the prevalent opinion among the proponents of this model is that the Indus elite used the control of raw materials used in the production of artifacts as a means of control and thus assured the uniformity of material culture. Some crafts could be regulated because the raw materials were difficult to obtain, others because the technology was complex.

The access to specific materials could have been carefully regulated by controlling trade or even direct control of the elite on the acquisition mechanisms. The walls and gateways would also have

allowed for control of the export trade in finished commodities. This control could have been exercised both directly and indirectly through restrictions on the movement of raw materials, on technological knowledge, on labor, on distribution of finished goods, through taxation or outright prohibition. For example, by bringing partly processed raw material to the urban workshops, the rulers and merchants of the Indus Civilization could be able to control and standardize the production of specific items that were used in important rituals or to define status. Such crafts, as stoneware bangle-making, seal production and chert weight manufacture, may have been directly controlled in segregated workshops by the rulers, merchants or the state to limit access to these important symbols of power. Other crafts such as ceramic production, metallurgy and faience making were probably grouped together to share resources, labor or raw materials. In this way, it was possible to maintain the status quo through a control of economics and technology, rather than through overt military action or other coercive actions.

The above-stated role of the merchant elite in maintaining the standardization and creating the apparent uniformity in artifacts may be a valid model but according to some archaeologists, their influence, manipulation, and control seem to be highly exaggerated. The regional uniformity in styles and forms, along with the combination of raw materials used, was not the invention of the Harappans alone, it already existed in the Early Harappan level in Sindh and Baluchistan or even earlier. In the Early Harappan period (3500-2600 BC), craft objects were locally made and varied both in style and in quality from region to region but they kept a degree of uniformity of style and material base. Of course, there was not yet a functioning state anywhere in the region. Furthermore, it is hard to see if the Harappan state or the merchant elite indeed had such overwhelming power over the Indus cities. Given the general level of technology and the apparent means of communication, the existence of such a state apparatus is difficult to visualize in any Bronze Age civilization. It is, therefore, possible that we are either trying to read too much in the given uniformity and standardization of the Harappan artifacts, or not yet understanding the mechanism for the evolution of such a homogeneity in cyulture.

Rulers and Palaces: Conspicuous residences of rulers have been a hallmark of almost all early states. Such palaces are, however, not identifiable either in Mohenjo-daro or Harappa, which are the largest of the Indus cities and have been extensively excavated. On this basis, it can be argued that such a ruling class did not indeed exist in the Harappan Civilization and it may only represent a stateless society. Ratnagar (14), however, takes issue with this conclusion. According to her, the absence of any structure that can be characterized a ‘palace’ at Mohenjo-daro does not mean that there were no palaces. For one thing, the citadel buildings have not been fully excavated. For another, the Mohernjo-daro citadel as a whole is fortified unit which contains architectural provisions for residence, ceremonial activities, craft work, and storage. This is in keeping with capital cities of several early states.

Ratnagar brings to our attention that Bronze Age palaces were never residential units alone. Third-millennium texts indicate that the Mesopotamian palaces employed large numbers of ration workers, owned agricultural lands and herds, employed some kinds of craftsmen, engaged in long distance trade, and were a large consumer of food and wealth items. In the Kish and Eridu palaces store rooms are identifiable. The large unfortified Middle Minoan palace at Knossos *(ca.* 2000 B.C.) contains magazines, a shrine, ceremonial passageways, and perhaps a courtyard for bull games, together with residential rooms. Minoan palaces organized an economy centered on vine and olive cultivation and herding, and a flourishing sea trade, and employed craftsmen to produce stone and metal objects. Perhaps the fortified Mohenjo-daro citadel is the functional equivalent of these palaces, the various

functions being spread over several separate but interconnected buildings (14).

The City Planning and Architecture: Data on Harappan settlement layouts is scrappy and often unreliable. It is true that neither at Mohenjodaro nor at any other settlement do we have a base grid of the accuracy or symmetric squares of a Roman town, there are systems of wide streets running down the lengths of habitation areas, not perfectly parallel with one another but still quite parallel; not intersected by narrower streets at perfectly right angles but still making square junctions. In spite of all imperfections, we have the division of habitation areas into roughly rectangular blocks, each of which contains several houses. This is more so in the Indus plains than in the settlements in Gujarat and the Divide.

Ratnagar (14) and several other archaeologists before her infer that such a grid plan settlement could not have taken place without a compulsory settlement of people according to state ordered norms. That is, grid plans reflect the existence of state-implemented settlements. This was not a unique experience in the Indus Valley: corroborative data from various historical contexts support this interpretation. Gleave (23) shows that in the early twentieth century many Yoruba people were encouraged to resettle in new locales by the British administration so that there may be better vehicular traffic, services, and administrative facilities [not to speak of political control]. The new towns had the same house types, crafts, markets and economy as did the old. But they differed from the old in that they were now laid on grid plans. We also have the evidence of Greek and Roman cities outside the homelands. Greek gridplan towns overseas were the product of expanding situations involving the creation of many new towns and the occupation and reallocation of their adjoining territories within a cultural context in which the city was the natural political and social unit. Nearer home, we can cite the case of Taxila. The Bhir mound settlement was not a planned one, but when the town was transferred to a new location for better defense and water facilities in the first century, Sirkap was laid on a clear chessboard plan (24). Similarly, at Charsadda the unplanned Bala Hissar settlement was shifted to the site of Shaighanin, the first century B.C, where the grid plan is clearly evident.

It may therefore be inferred that the grid plan layout reveals that a settlement has been implanted or is a relocated settlement, and that it is the result of controlled and coherent building activity. It is also clear that the uniformity of brick size reveals that large numbers of people were put to brick making as settlements were being built under state supervision. Architecturally, variation in materials of construction or size suggest differences in the social status and wealth of the occupants of the structures. This archaeological assumption has recently found ethnographic support in the Near East and elsewhere (14).

Citadels: Claessen and Skalnik (18) have concluded from their study of 21 early states that “there is a tendency on the part of the emergent class of rulers or the ruling stratum to live more or less apart from the other citizens of the state”. In light of this finding, the discovery of residential units in the citadels of Mohrenjo-daro, Kalibangan and Surkotada and possibly Harappa may reflect this tendency. (Evidence from other Harappan sites is too limited to determine the presence or absence of residential structures on the citadels). Flam (25) sees the elevation of and apparent restricted access to the citadel or "acro-sanctum" as indicative "of some form of authority and/or ceremony, the institutions, structures, and activities of the socio-religious elite were corporeally symbolized by the acrosanctums."

Dhavalikar (26) explain the function of the citadels for keeping the ritually purer caste separated from the common folks. He even ties up this purported function to the putative existence of caste system in the Harappan culture. He bolsters this claim by citing threefold settlement at Kalibangan and probably four at Harappa, thus tying it up with the fourfold division of the Harappan society in line with the later Hindu social order.

In each case, the presence of ‘citadels’ at most of the major settlements indicates the existence of a ruling class that lived separately from the general public. The evidence at hand gives credence to a state-level organization of which this class was the ruling component.

Monumental Architecture: The presence of what have been described as public buildings of no apparent religious purpose, especially on the citadels, could have provided at least sheltered space for secular meetings and administrative functions (27).This accords with the findings of Friedman and Rowlands (28), who see a trend among early states to place administrative and other secular public buildings within the ritual precincts of early urban communities. Fairservis (29) referred to "an open court" and a ‘pillared hall’ excavated at Mohenjo-daro as evidence of areas for assemblies of chiefs, which he suggests may have been "a basic part of Harappan political organization”. Additionally, the tentative identification of "substantial, nonresidential buildings" at the small Harappan village-size site of Allahdino would seem to satisfy one criterion for the archaeological identification of state-level organization suggested by Wright and Johnson (30). They implied that "tertiary centers of administrative control" located in relatively small communities marked the emergence of the state during the Uruk period in Mesopotamia.

Weights and Measures: Archaeology shows that the calculations and measurements, which are essential for the progress of complex thought, have their origins around 2800 BC in the Indus Valley, approximately the same time span (around 3,000 BC) when they appeared in Egypt and Sumer (Iraq). This period is also the one when states had just recently come into existence in Egypt and Mesopotamia, and probably in the cities of the Greater Indus Valley.

The presence of standardized weights and measures, evidently, does not indicate the existence of state, not their absence negate its existence. It is the shear expanse of the area where such weights and measures were being used, that is unique and thought provoking. Could such a spread of standardized weights be possible without an active hand of a central government?

Population Size and Geographic Range: According to Baker and Sanders (31), political units of larger than about 50,000 population tend either to fission or to form states, although states are known that have had as few as 6,000 people. Claessen and Skalnik (20) could find no correlation of state-level political organization with population size, and Sahlins (32) notes that some chiefdom-level societies have encompassed populations as high as 100,000. No population estimates for the Harappan Civilization as a whole are available. Three estimates for Mohenjo-daro are from 33,469 to 41,250 (26) with a mean of 36,573. The two estimates for Harappa average 36,078. Ganweriwala is about as large as Mohenjo-daro (33).

Chakrabarti (34) lists 35 Harappan sites for which at least some surface area figures are available. Using the same density calculations for 32 smaller settlements as applied to the major cities, a population count of almost *135,000* is derived; assuming lighter density for these settlements provides a rough estimate of 100,000 people. This total added to the 143,500 estimated for the four urban centers yields a sum of 243,500. To this must be added also the population of the rest of the

nearly 200 known settlements that constituted the Mature Harappan phase at any one time (16). Some Indian archaeologists would like to count the population of more than 500 “Harappan” sites that have been “recently discovered” in India, but they are either not Mature Harappan or too small to be counted. A population for the civilization of at least 400,000, then, seems reasonable. This would appear to be quadruple the population of the largest known chiefdom society anywhere in the Old World (35). Further, the geographic range of the territory in which Mature Harappan occupation levels have been found now covers more than one million square kilometers, an area much larger than that encompassed by any early civilization.

According to Ratnagar (14), the shear expanse of the Harappan Civilization, and the estimated population count therein, would intuitively indicate the necessity of a centrally organized state structure. This is a weak argument and has no basis in comparative studies of other Bronze Age civilizations. Nevertheless, unless an alternative model is suggested for the manifest cohesion of such a large population, spread over such a large area and over such a time span, the argument does carry some weight.

Settlement Hierarchy: Wright and Johnson (30) suggest that states are characterized by a four-tiered community size pattern, with the tier of the largest size represented by the fewest settlements, or perhaps only one, and with successively more settlements for each tier of successively smaller community size. In Mesopotamia, such four-tiered societies were governed by three-tier "decision hierarchies". Other authors, failing to distinguish between decision and settlement hierarchies, generally accept three-tier settlement organizations as characterizing state or state-like polities (3). As stated earlier, Mature Harappan settlements do not lend themselves to be categorized in any 3- or 4-tier pattern. Still, the study of Harappan site areas by Chakrabarti does indicate, although very vaguely, a tendency for site areas to cluster at three or four size levels. The tendency among early states to be ruled from a primary center (32) may be reflected in the possible distinguishing traits of Mohenjo-daro, Harappa, and Ganweriwala, pointing to three, four, or even five regional states.

This interpretation is countered by Fairservis who believes the Harappan society to be all ‘village’ and no ‘city’. His classic statements ("more villagelike than citylike"), has already been referred to earlier. Since he finds no difference in material culture between cities, such as Mohenjodaro and Harappa (the large villages) and much smaller settlements like Allahdino and Balakot (the smaller villages), there is no settlement hierarchy beyond the settlement size.

Burials: Differentiated burials and varied amounts of burial goods in individual graves have provided a good evidence of social differentiation in several early societies, Egypt, with its pyramids, being an extreme example. Elaborate burials such as those which characterized the florescence of the ancient Egyptian, Mesopotamian, Chinese, and New World civilizations have not come to light in the Indus Valley. Burial differences possibly associated with status are known, however, in the form of rare brick-lined grave pits at Harappa, Kalibangan, and Lothal. It has been pointed out that some of these graves contain far more offerings of ceramic vessels than do the ordinary, i.e. unlined-graves, and this may be indicative of the high social status of the deceased. "Fractional" burials, in urns, of the bones remaining from skeletons supposedly left exposed, are noted for Mohenjo-daro, but no relative social status has been suggested for these individuals (3).

At least four explanations can be offered for the relative paucity of grave offerings: (a) elaborate burials of the upper strata of Harappan society have not yet come to light; (b) as in ancient Europe,

inheritance practices, sumptuary laws, and religious proscriptions against more bountiful grave offerings could have precluded more opulent grave furniture, even though the society had been markedly stratified economically; (c) final disposal of individuals from the higher strata - by cremation, for example - could have left no archaeological trace; and/or (d) the burial evidence at hand reflects the lack of marked economic stratification to be expected (20).

Art: We can also try to identify portrayals of a ruling elite in Harappan art. There are no Harappan wall paintings, nor have we found any stelae showing the exploits of rulers in relief, as we have in Sumer. Harappan bronze sculpture tends to be confined to the depiction of animals, except for a few figurines of women. Figurines in clay no doubt depict people almost always in folk style, that is, with schematic modeling and applique techniques, and no attempt at realism or formalism. There is no depiction of the elite, except, perhaps, the stone sculpture of the ‘PriestKing’ and another seated person with the head broken. There are also no representation of symbols of power and authority.

This has been taken as the absence of a powerful elite, if not kings and emperors. But, the palace complexes of Minoan Crete, for example, have also not yielded any such evidence in art. Furthermore, let us remember that in ancient Pakistan there appears to have been no tradition of monumental royal portraiture, except among the Kushanas and Pallavas. Of course, many instances are known from ethnography where the symbols of kingship are fires, taboos and protocol, drums and other items of perishable or even non-tangible nature. Also, symbols of power are as likely to be found in myths, epics, or fertility rituals, as in painting or sculpture.

To summarize, while evidence for socioeconomic stratification in the Harappan Civilization does not reveal the same marked differences found in some other ancient urban cultures, the evidence is not incompatible with the relatively limited degree of economic stratification which characterizes early states (36).

Writing: The invention of writing, is considered to be one of the major achievements of a civilization as it represents a level of sophistication in which a culture can convey complex concepts by means of symbols through time and space with explicitness and clarity. The Sumerian and Egyptians civilizations clearly represented such a capability. The Harappan Civilization is also believed to belong to those old Bronze Age civilizations which were literate and conducted their important business or administrative functions through some sort of inscribed records and instructions. However, while the script of the Sumerians and the Egyptians have already been deciphered, the Harappan inscriptions have not rendered themselves to be read. Additionally, no extensive samples of writing larger than a few signs have been discovered. We do not know much about the socio-cultural locus of the Indus Civilization and the place of writing in any sociopolitical organizational structure. There are no accounts, no lengthy tablets, no rock inscription, and no economic records of any kind, so it does not look like a writing system that was deeply embedded in the common culture or even an instrument of state.

Writing was sometimes ago thought as an essential element of a complex society, a civilization, or even a state. This position has, however, recently changed as civilizations have been discovered that were not literate but still stateorganized societies. This argument has, therefore, lost its force. Furthermore, questions of the very nature of the Harappan notations have emerged. For example, Farmer and his colleagues have come up with the thesis - and convincingly so - that the Harappan Civilization was a script-less society. What we have so far regarded as the Harappan script, denoting

speech, is in fact nothing but non-speech symbols, just like the traffic signs on modern highways, probably serving as amulets or signs of personal identification For details, see Section III.

Apart from the question whether the Harappan society was literate or illiterate, we have no evidence that Harappan writing played any role in the functioning of state or the state may have functioned in the spread of such writing. As Shaffer suggested: “in the Indus Valley, a literate culture was achieved without centralized political government”.

Specialization: Another clue to the nature of economic and political organization is seen in labor specialization. Labor specialization is found at all levels of cultural development, but it is considerably more marked in state-level than in less complex societies. In the Harappan Civilization, specialization of production had reached a point where not only were certain areas within urban sites devoted to special crafts, but entire sites seem to have functioned around a specific industry, activity, or trade. These include recently discovered Harappan industrial sites in Cholistan which specialized in brick making, ceramic production, copper smelting, and the like (37). Elsewhere, labor specialization has been noted for a frontier settlement, Shortugai across the Hindu Kush. The support of so wide a range of full-time specialized activities other than food production would seem beyond the organizational capabilities of stateless societies, and is indeed unknown among such groups (3)**.**

The Mobilization of Surplus: It is often assumed that the 'granaries' at Harappa and Mohenjo-daro attest to the extraction of harvest taxes by the Harappan state. Occasionally it has been said that the 'granaries' are evidence for a redistributive economy, although few scholars have tried to spell out just what would be involved in redistribution. To determine the function of the buildings, which have been declared “granaries” is difficult in itself and there is no consensus on their real function. Were these three buildings used for storage? If yes, then for storing of what? Ratnagar (14) has discussed this issue by considering the functions of these ‘granaries” at Harappa, Mohenjo-daro, and Lothal.

All three have been built on elevated ground. The Harappa building stood on foundations whose facing or retaining wall was at least 1 m high. The Lothal platforms stood on a mudbrick, rammed earth and rubble platform about 4 m high, and the Mohenjo-daro structure was built on the high Citadel. The numerous granaries and stores built by the Romans also had elevated floors, except where these were relatively early in date and where the flooring was of stone or some other impermeable material. Closer in date to the Harappan structures are two building units at Ur. The earlier of these is a row of six long and narrow rooms in the Early Dynastic temple enclosure, termed 'shrines' by Woolley but identified as storerooms (14). Unlike the other rooms in the temple enclosure these six units had floors made up of fifteen courses of baked brick, the lower courses set in bitumen and the upper in clay mortar, so that each was approached from three steps from the courtyard. Deliberately elevated floors or foundations are therefore our first clue that the Harappan structures were storage facilities.

Problems, however, remain. For example, for all three of the Harappan structures we have wooden walls, although hundreds of dwelling units at these settlements had very thick brick walls. Roman granaries could have solid stone walls 60 cm to 1 m thick, and at Early Dynastic Ur the six storerooms mentioned above had brick walls about 2 m thick. While we would expect state storage structures to have been built on a standard plan, it is not impossible to imagine that the facility at Harappa, with its unique construction and very strong substructure, was a grain storage facility, while those at Mohenjo-daro and Lothal were used for storage of other goods like metal, shell, timber, or

craft goods. This would explain why the Harappa building is not located in the Citadel, but out near the river. And about 100 m to the south of this building lay two rows of perhaps 20 circular platforms, all of them of the same size, equidistant from one another except where an older well disturbed the alignment, but constructed in the same manner. These may have been public or state facilities used for husking, pounding and grinding grain.

No grain was found in the storage building at Harappa; the only antiquities found were three jars, a small seal, and a macehead. Similarly, in the Mohenjo-daro structure only charcoal, small pots, and a faience bead were found. Ratnagar suggests that the paucity of large storage pots in the three Harappan structures need not argue against storage functions. Large containers are also absent in the Roman horrea, in spite of the textual evidence that they were used not only for grain but also the storage of wine and Qil. Ratnagar (14) thus arrived at the conclusion that the three Harappan structures were storage facilities, but that only the building at Harappa can with confidence be interpreted as a grain storage facility. What does this tell us about taxation or redistribution? Although the evidence of taxation by the state, receiving and storing of tribute, and redistributing it in times of need, is robust in Mesopotamia, such an evidence in the Harappan Civilization is missing.

While we listed the difficulties in interpreting the structure at Mohenjo-daro as a grain storage centre, we still expect, at this preeminent center, the existence of a granary, a large structure, and not simply an adjunct to an elite residence, which stored the produce of state lands. Or else the state agricultural lands were widely dispersed and grain was disbursed or distributed at the threshing floors and was not centrally stored. A third possibility is that state service involved work for individual elite households within the largest city rather than for public institutions like a temple or palace. It is not impossible either that we have not yet found the Harappan granaries, that we are looking for the wrong kinds of structures or in the wrong locations. Considering what we know from the cuneiform texts about the Mesopotamian temple economy, here too the identified storage buildings are surprisingly few. We know from the texts that the temple did not always have centralized storage (14).

The Mobilization of Labor: The power of the Harappan state to mobilize huge workforces is apparent in the construction of the massive platforms on which many of the towns and cities were built. Those at Mohenjo-daro are the most impressive feat: Jansen calculated that the platform underlying the citadel there would have required 300,000-400,000 man-days' labor to build. Equally impressive were the walls that surrounded many of the urban settlements, freestanding or as revetment for the platforms: These were in some cases more than 15 meters thick and could be as high as 9 meters, and they were furnished with elaborate gateways.

The sinking of wells was also a substantial undertaking: Mohenjo-daro is thought to have had around seven hundred, created during the foundation phase of the city's construction. Digging the reservoirs at Dholavira was also a vast project: at least sixteen in number, they together covered about 17 hectares and were excavated down to bedrock or in some areas cut down into it. Soil taken from them was built up into massive bunds (dykes), up to 7 meters wide and faced with masonry, running between the reservoirs. A number of dams were created on the two seasonal streams, running past the settlement to divert water into the reservoirs. In addition to the labor of their original construction, regular work was required to maintain the reservoirs and remove any accumulated silt. While not on the same scale, the Great Bath at Mohenjo-daro and the “dock” at Lothal were also considerable feats of hydraulic engineering and labor mobilization.

The Harappans did not build monumental temples or tombs but these platforms, walls, and basins were similarly vast projects requiring the bringing together, feeding, and management of huge numbers of workers. While the work at Dholavira and Lothal may have been undertaken during the slack period of the agricultural year by the inhabitants of the settlement and its hinterland over the course of a number of years, the construction of the platforms and walls for the foundation of towns and cities in the core area were undertakings that had to be completed before the first houses could be built, and work could take place only during the winter months when the plains were clear of floods. Small huts found by the Aachen team when investigating the Mohenjodaro citadel platform were probably occupied by the workforce.

Now, it is difficult to imagine the mobilization of labor on such a scale if the society was not organized as a state. Ratnagar (14) has made the argument that it was in fact the state that mobilized the labor on a large scale and this constituted the mobilization of 'surplus'. In her opinion, the state mobilized labor to make large quantities of brick, to lay out new settlements, or develop quarries or shell fisheries. An infrastructural equipment of metal and stone tools and transportation seem to have been made available to the local communities. That is to say, the Harappan state seems to have mobilized labor in order to promote and regulate subsistence and craft production, and to have organized the distribution of tools and equipment or techniques for this purpose.

MECHANISM OF CONTROL If a central authority is a prerequisite for the rise of an urban civilization, or, conversely, if the rise of central authority is the logical outcome of an urban society, the question arises as to what was the nature of this authority in the Harappan Civilization and how did this authority control the peasantry and extract its surplus. Above all, were the means of control within reach of the ruling elite? These questions have been debated vigorously and it still continues.

The Harappan evidence has generally been made to fit certain evolutionary and historical schemes which implies the existence of a king, an emperor, a 'pope', a city council of elders, or some hereditary aristocracy. It has often been compared to the city-states of West Asia where it is probably correct to surmise that there had evolved a political class in whose hand authority was legitimately constituted as dynastic kings, a college of powerful priests, a group of traders and merchants, or a hereditary elite.

When we speak of 'authority', we often confuse it with coercion and subjugation with force. This is not necessarily true: physical force can achieve some short term objectives but it cannot sustain a given social order for long. There are strong indications that the Harappan ruling authority, whether a king, the merchant elite, or any other entity, could not have the ability to effectively force and subjugate the masses over such a large area and over such a long time. Thus, if the use of a coercive force is eliminated as a means of control, then there must be some other elements that maintained, motivated and perpetuated the rules and social norms for hundreds of years in the apparently steady state. What these elements of control were, we certainly do not know. It does not, however, dissuade us from speculating.

Priest-Kings: All the early civilizations compared by Trigger (11) had kings. In modern political terminology this signifies sovereignty, or supreme authority, which was symbolically embodied in an individual rather than in some collectivity of people such as all adults, all males, all property owners, or all nobles or some abstract concept such as Brahmin's *God's Shadow*, Ibn Khaldum's *Aissiya*, or Rousseau's *General Will*. Kings were regarded responsible for the general well-being of their realm,

and their duties included maintaining internal order and prosperity, defending their kingdom from foreign enemies, and managing relations with the supernatural. Kingship provided the ultimate level at which conflicts were resolved and decisions were made about general polity, although this was often done in the king's name rather than through his personal intervention. Maintaining public order required ensuring that farmers remained submissive to the state, produced food surpluses, and paid taxes and rents. It also involved mediating and resolving conflicts among the ruling classes that threatened the unity of the state.

Claessen and Skalnik (18) concluded that statewide ideologies supported by a priesthood and embodied in a ruler whose position is considered sacred were "universals" among the 21 early states in their survey. Moreover, Webster (38) points out that the use of supernatural sanctions in early states legitimized the power and authority of the elite, in the absence of effective "concentration (centralization) of coercive force." Fairservis (17) and Flam (39) visualize a similar pattern for the Indus Civilization.

A state ruled over by priest-kings, wielding autocratic and absolute power from two main seats of government ...seems, then, to be the reasonable deduction from the archaeological evidence

of the civilization of Harappa.
(*Piggott 1952:153*).

Although individuals, families, and small communities in early civilizations, such as those of Mesopotamia, often had patron deities with whom they communicated either directly or through the spirits of their dead ancestors, ordinary human beings had only limited contact with the supernatural. The king, standing at the apex of society, constituted the most important link between human beings and the supernatural forces on which the welfare of both society and the universe depended. These relations were mediated by rituals that only kings or their deputed priests were able to perform. Since in almost all early civilizations the concepts of kingship were grounded in religion, it is safe to assume that the Indus kings, if they at all existed, were one way or the other connected to religion, thus the concept of the Priest-King.

In the Harappan context, the concept of a 'Priest King', ruling over the entire Indus Valley from its twin capitals, Mohenjodaro and Harappa, has been popular line among scholars since the excavation of Mohenjo-daro and it is sometimes still quoted in popular history books and is generally the stuff of the school and college textbooks. The belief in the existence of a Harappan king with the authority of state religion has been so strong that Marshall did not hesitate to identify the bust of a robed man found at Mohenjo-daro as that of the 'Priest-King'.

Kings with religious authority have generally been associated with building of impressive monuments and temples. For example, we learn about the kings and emperors of Egypt and Mesopotamia who ruled their kingdoms with divine authority through elaborate temples, palaces, and tombs. These publicly visible buildings were an important first step in asserting economic, ritual and political authority over the city and the region. None of these are present in the Indus Valley. In principle, the absence of monumental buildings by itself does not necessarily negate the absence of divinely ordained kings. In South Asia new rulers often established new cities or renewed the old ones, adding new markets to accommodate the merchants, but building new temples to honor the gods and goddess that protected the kingdom was not their priority. Temples have appeared in South Asia quite late in history because the gods and goddesses in this region were personal benefactors rather

than public objects of veneration.

Unlike Mesopotamia and Egypt, the representation of rulers in sculpture has never been a common tradition in Pakistan or the neighboring countries of India and Afghanistan. More than 150 stone columns and carved stone edicts were set up by Ashoka (274-232 B.C.), the most powerful ruler of the region and the first emperor of a large area encompassing Afghanistan, Pakistan and part of the present-day India, who prided himself as being ‘dear to the gods’. These monuments proclaimed the conquests of the king, his conversion to Buddhism, addicts of morality, and the new laws of the land, but not a single sculpture or portrait of the king ever accompanied the inscriptions. Stone images of rulers appear briefly during the Kushan Period (100 B.C.-230 A.D.), when foreign conquerors from Central Asia established their control over the Indus Valley and part of the Gangetic plains. Influenced to some extent by Greek tradition, coins with images of the ruler also became common at this time, but these imperial visages disappeared with the rise of the indigenous rulers. Thus, the absence of kingly or priestly manifestations in the Harappan art and architecture by itself should not form the basis of the negation of kingdom or the organized priesthood in the Indus Valley.

Kings are generally associated with palaces. But, do we need to believe that the king must live in a palace - a residence qualitatively different from an ordinary house? As we learn from Alexander’s historians, Ambhie’s ‘palace’, that is, that of the King of *Takṣaśilā*, was a house that was no different from other houses with a courtyard, tucked away at the end of a winding, narrow and muddy street. There is also no mention of the palace of Porous who fought so valiantly against Alexander’s army. Kingship is also associated with imposing tombs but many early societies did not erect tombs over their dead kings: the Indus Civilization is one of them: “the King is dead, long live the King” was most likely the dictum.

The possibility of a priest-king ruling the Harappan kingdom theoretically exists, but looking at the evidence in its totality it does not seem probable. The area of Harappan Civilization was simply too large to be controlled by a king or a ‘pope’ or even a confederation of such entities. Personal rule cannot be maintained without the use of force. Thus, if we subscribe to a king, even to a priest-king, we must subscribe to the force of arms as a means of control. On the basis of these argugments and keeping in view the nature of the Harappan society, the idea of “a state ruled over by priest-kings, wielding autocratic and absolute power from two main seats of government” (1) has been abandoned altogether in recent years.

Control through State Economy: On the basis of her research on Mesopotamian economy and the contemporary conditions in such diverse areas as Egypt, Crete and Turkmenia, Ratnagar (14) strongly argues that however diverse in culture and languages, the Bronze Age civilizations had certain social features in common. Taking these common features into consideration, she proposes that the Harappan economy was largely a state controlled economy and it is this tool that the Indus elite used for its political control without overt violence. It was this kind of state economy that must have made possible the production of shell bangles on a seemingly larger scale at the small site of Balakot than at Mohenjo-daro. Conversely, it cannot be the laws of conventional market economics that explain why prolific shell production should have been done at Gola Dhoro at such distance from the major centers of population (that is, consumption points). Nor can it be the principles of market economy that explain why the storage facility at Lothal in Saurashtra, where only a few Harappan settlements are known, was larger than its counterpart at Mohenjo-daro, which was by far the more extensive site and situated in the midst of an area noted for its agricultural productivity.

Ratnagar (14) seems to argue that the people in the Harappan villages and towns were less dependent on one another than on the state, which appears to have organized certain infrastructures for communication as well as the production of pottery, chert tools, and bricks, and distribution of metal or metal tools. In this respect, the Harappan political and social structure radically differed from that preceding it or that following it; the chief distinguishing factor being the existence of state with centralized powers to acquire and distribute the key raw material needed for the urban as well the rural needs. The comparison of the range of artifacts and materials of Mohenjodaro with those of the smaller sites would show that much of the non-subsistence economy drew on elite demand. This and the fact that so many of the nonagricultural productive activities depended on tools of copper and/or bronze, gives credence to the state initiative that was needed for the acquisition of the copper ore from afar. Smelting of copper was an extensive economic activity and it is hard to imagine that it could have been undertaken without the initiative, or at least the support, of the state. The same applies to long-distance overland trade and the maritime commercial activities. Again, it is hard to imagine that individual merchants or even the groups of merchants were able to undertake these kinds of ventures on their own. Wherever we find such activities, we notice the involvement of the state, that is, that of the kings and the city temples.

Ratnagar also argues for a Harappan state economy wherein the state directly owned some means of production and had the right to appropriate the labor of the subjects. Such a means of control is not unique to the Harappan Civilization; other Bronze Age states have also practiced some degree of ‘public-sector economy’ (40). For an example, we may look at Mesopotamia. The state-organized production on fields, orchards, herds, and fisheries was owned by various temples and the palace. By the late Early Dynastic period, temple estates had become *de facto* royal property. Some temple lands which were allotted to high functionaries were cultivated by tenants in return for rent. Thus, the state, through the temples or the higher functionaries of the royal court, directly controlled a substantial portion of food production.

The rural communities, organized on tribal or lineage principles owed the state not a portion of their harvests, but labor and military service only. Those who labored for the state - either all the year or for a few months in the year - received regular rations in barley, oil, and clothes. For agricultural work, seed, ploughs, and working animals were handed out by the temple or palace. Temple or palace workshops employed people in weaving or baking or chariot building. Other than continuous production, state work also involved specific projects such as building temples or other constructions, for which huge teams of men were recruited under supervisors and equipped with rations, tools, and replacements. In the Early Dynastic period foreign trade was carried on in the name of the King; imported materials were weighed out for the king in the Lagash palace (14).

The state sector was also an eminent feature of the Shang state of bronze age China *(ca.* 1700-1100 B.C.). Inscriptions refer to overseers of agriculture and to groups of laborers sent to work in fields under supervisors. Oracles predicted the harvest to come. At Hsiao-t'un, a ritual and administrative centre 3 km to the northwest of the walled capital An-yang, a storage pit with 3,500 stone sickles, used and unused, was found. Here a major craft complex yielded hundreds of metal casting molds, stone knives, and bone tools, plus evidence for shell and jade working. It appears that craft production was largely confined to the major capitals like An-yang and Cheng-chou, or to satellite settlements around them.There was no landed nobility in Shang China, and the state used its own stores to equip and provision soldiers and workers. The Shang period saw intensive warfare and the state used captive labor on a massive scale. Meanwhile, aside from labor, the king also received tribute from subjects

and neighboring vassals in horses and cattle, in turtle shells and cowries (14).

If we consider how Egypt acquired building stone, precious stones (amethyst, carnelian), or gold from her neighboring desert regions, we also see the importance of the state sector during the Middle and New Kingdom periods. Particular expeditions, with specific quantities of material as the target, were sent out to mines or quarries. In one case over 8,000 personnel comprised the task force, in another, 1,006 people. For the duration of such enterprises monthly food rations as well as oil and clothing were issued to the crews. Although archaeological evidence for large-scale craft workshops in not frequent, there is little testimony for independent craftsmen producing directly for the market until the end of the New Kingdom: most work seems to have been carried out by craftsmen attached to temple or palace, although specialists did supplement their income by doing work for private customers (14).

Let us also recall the pyramids of Old Kingdom Egypt, silent but powerful testimony to the recruitment of the labor of thousands of men at a time, over several years, and the evidence from Minoan Crete (2000 to 1450 BC) for the palace as owner of agricultural lands and herds, and the organizer of craft production and trade. The storage space in the Knossos and Phaistos palaces could comprise 20 to 30 per cent of the total area, so that goods stored in the palaces could not have been for elite consumption alone, but to provision those who worked in various capacities for the palace.

The state sector in its most developed form, however, appears among the Incas. The Inca state (A.D 1430 to A.D.1530) was founded on a very simple technological base. There was a limited use of bronze, no plough or wheeled vehicles, no animal riding, and no writing. Yet at its widest extent the Inca state covered an area of more than 984,000 km, an area as large as the Harappan region. The Inca economy has been characterized as a two-tier economy. Local kin groups, holding agricultural lands and llama herds jointly in lineage tenure, were basically selfsufficient in food and craft products, and engaged in some intercommunity exchange, especially along the coast. In the second tier, the state was involved in production. State agricultural lands were created by territorial appropriations from local or conquered groups, by terracing, or by bringing tracts under irrigation.

Inca kings owned enormous royal estates, for which commoners provided the labor. People were transported into newly created agricultural estates to work on the lands. For example, in the Cochabamba Valley, the local population was expelled and a vast area of land was organized for maize production, some 14,000 agriculturists being brought in to work this land from other regions. The cultivators were granted small plots for their own use or were given provisions from state granaries. The state also took over the organization of llama herding, metallurgy and craft production, not to speak of road building and the construction of hillside terraces. For the manufacture of textiles, pottery, silver, and bronze artifacts, workers were settled, each for a limited period, in 'artisan islands' for production in workshop conditions. Every kin group surrendered a portion of its people to work for the state on a rotating basis. Some kin groups, compulsorily resettled in new areas, could also have become craft-producing groups (14).

Control over the production of wealth goods was more centralized. Fine textiles, silver ('the tears of the moon') and gold ('the sweat of the sun') were the visible markers of social status. At the time of their conquest the Spanish discovered huge Inca stores of fine textiles, silver and gold. Silver and gold sheets covered the walls of the palaces and were used for statuary, ornaments, and ritual vessels. Fine cloth *(kumpi)* was also a true prestige item, worn and presented at all *rites de passage*, and used

in burial furniture and to wrap idols. The Inca king presented visiting officers and local aristocrats with fine cloth, which was for the receiver a rare privilege. 'No political, military, social, or religious event was complete without textiles being volunteered or bestowed, burned, exchanged, or sacrificed' (41).

While hundreds of workers were recruited in textile *mitimae* to produce ordinary cloth in various places, elite households maintained skilled 'makers of *kumpi*, so that spindle whorls and needles are more common in elite houses than in ordinary ones. The state could also organize the production of *kumpi* by specially recruited or 'chosen' women in workshops in the regional capitals, such as at the structure excavated in Huanuco Pampa. At Cuzco, the capital, there were full-time and hereditary craft specialists producing especially metal items for the elite. Meanwhile, silver and gold mining were carried out either by recruited labor or under traditional methods by local leaders, who sent the metal to the Inca as gift or tribute (14).

Thus surplus mobilization in the Inca state took the form of labor levies rather than a tax on individual or community production. The Inca state was involved in the organization of production on a scale unparalleled elsewhere, and this while local communities remained largely self contained, and no money or market systems prevailed.

In asking why production in the state sector is so important in the simplest state structures, one can first suggest that it is essentially connected with a preceding tribal past. There is little development of private property in basic resources, and land is still, for the most part, collectively held by kin groups. In Mesopotamia, land purchases had begun in the Early Dynastic period, when members of the ruling elite bought tracts, large or small, from kin groups in return for food items, copper, or textiles. But no agricultural land sales are known in the Ur III period. This means that class divisions were not yet well entrenched - that the ruling elite was not securely rooted in economic privilege. The lack of money and market-system economies rendered impossible any system of ramifying networks of impersonal exchanges based on the exchange-values of goods, and rural communities were as yet selfsufficient in many respects. We had noted earlier that the rulers of early states assume sacral roles, conducting the national rituals on behalf of their people. In such a situation tribute and labor for the king would be ideologically and practically more feasible than systems of computing and collecting a particular proportion of output throughout the realm in the form of tax or rent (14).

When discussing the problem of urbanization Ratnagar has suggested that specialization and the division of labor are not, in the bronze age context, a matter of full-time and exclusive production activity arising from expanding markets and the need for economies of scale. Rather, it was emergent ruling elites, with their new needs, who posed new levels of 'demand' for wealth. So it appears that continuities of some forms of tribal organization, tribal land tenure, an inchoate division of labor, sacral kingship, and the burgeoning of production for new needs under state auspices, are inextricably interconnected elements in the structures of the earliest states (14).

Ratnagar shows that the state sector can take various forms. Subjects may labor on the estates of public and central institutions such as the Mesopotamian temple or the Inca royal estate, or they may produce regularly for the royal court in their own villages as in the Kuba state; or, they may work in individual elite households. Rulers may sponsor particular projects like the quarrying of a particular stone, or labor in the state sector may be an ongoing process of herding or agricultural production. The state sector can incorporate subsistence production, building projects, craft work, mining,

external trade, or the creation of monumental works of art. It could demand special skills, or none at all. Laboring individuals could include subjects as well as war captives (14).

In spite of the very pronounced development of the Inca state sector, archaeologically very few architectural units can be distinguished as craft loci. A rare instance at the provincial capital of Huanuco Pampa was a large planned complex with fifty independent architectural units, which yielded hundreds of spindle whorls and jars, as well as bone tools and women's ornaments. And no Mesopotamian temple has yielded dozens, leave alone hundreds, of spinning and weaving tools although the temple ration texts indicate that large numbers of people were engaged in textile production in the temple workshops. So we cannot arrive at any formula for the material culture correlates of the state sector (14).

In Harappan archaeology, no factory style production centers has been found; implanted settlements and the metal and stone-blade tools may well be the best evidence for state organized production and distribution. How far the state controlled the economy is still an unresolved question.

Control Through Trade: For sometime, it has been hypothesized that the traders and merchants of the Indus cities controlled the movement of essential raw materials and were thereby able not only to profit from the commercial transactions but also effectively control the artisans and their craft activities. Since the peasants depended on the metal and stone artifacts produced by the city artisans, they were also beholden to the control of the traders as well. Additionally, the control over the key raw materials must have made possible the subcontracting of the various stages of craft production, or controlling the artisan’s livelihood outright. The combination of these three factors, i.e. the control of raw materials, the dependence of peasantry on cities for tools, and the control over the labor of the city artisans, must have given the merchant elite an effective control over a large sector of the urban economy, to the extent that no challenge to their authority could be raised. This scenario has been commonly illustrated by considering the trade and working of metals, especially copper and bronze.

Because of the presumed high value of metal tools and ornaments, it is likely that the production and distribution of metal objects was closely monitored by the ruling elite. This could have been accomplished most effectively by dividing the labor into distinct stages that could be organized and controlled by a single merchant or head artisan. For example, figurines made by the lost-wax process may have been cast by one group of artisans and finished or fabricated by another group in a separate workshop. Incised copper tablets were probably fabricated by assistants and then inscribed by a master scribe. Ornaments such as beads and spacers may have been cast and fabricated in a metal workshop, but polished and strung with carnelian beads in a merchant’s showroom. Although, there is no hard evidence for this type of intricate organization of artifacts from any Harappan site, ethnographic evidence for such a system of control by merchants of some handicrafts is available in the present-day India and Pakistan.

The control of trade in raw copper would have been another mechanism for controlling the artisans and assuring the general quality of the artifacts. This is approximately the same type of arrangement currently being practiced in the modern cities of Pakistan in the sectors of fine jacquard silk fabrics, hand-knotted carpets, jewelry, embroidered goods, and the like. The merchant supplies the artisans the raw materials and collects the finished or semifinished goods for sale or further processing and finishing. In India, quite a few additional goods are being manufactured this way. For example, in Indian Punjab and Haryana the merchant supplies the artisan the copper or bronze sheets, the artisan’s

family, in turn, hammers out the traditional copper or bronze utensils commonly used by the traditionbound residents. The merchant collects these metal utensils and gets them ‘tinned’ by another artisan’s family. He puts the finishing touches on the utensils and takes them to the market

To facilitate their control over the economy, the Harappan merchant elite made the trade and exchange system uniform which was accomplished through the use of common and standardized weight and measure system, described in Volume III of this series. Thus, coercion through force of arm was effectively replaced by coercion through trade as the major form of control. According to this model the control of trade gave the elite a virtual control over the livelihood of the urban masses.

The role of the religious and social norms in maintaining the caste system is often presented as an example of a “voluntary” submission of the masses to the exploitation of the ruling classes. It is, however, generally overlooked that there has always been the power of arms of the *kshatriya* behind the enforcement of such a social norm.

With the demise of the Priest-King and in the absence of a ‘despot’ with force of arm, this model had a long sway in the thinking of practically all archaeologists of the Harappan Civilization. In fact, it still finds glib description of the Harappan state in many textbooks and popular literature on the Indus Civilization. The ubiquitous finds of Harappan seals as an ‘instrument of identification’ of goods or merchant clans were linked to this extensive Harappan trade. There is, however one problem in this theory: while the existence of such a society is theoretically possible, there is no such example in the annals of history anywhere in the world.

The role of trade in controlling the political power of the land has been recently challenged by several scholars. For example, Ratnagar (14) is of the opinion that it was the political unification of the Indus Valley that gave rise to widespread trade rather than the trade facilitating the political control of the masses. As a result of this political unity, it became possible for the produce of a few centers to be utilized at a large number of other population centers. According to her, the Harappan system of weights is an excellent testimony to the fact that political unification made for a degree of regulation of exchange activity possible. Prolific trade does not by itself prompt the emergence of a uniform measurement of weights - in the numerous city-states of Mesopotamia several weight systems flourished until such time as the land was brought under the control of the kings of Ur and an administrative authority enforced a uniform system.

“.... the maintenance of law and order seems to have been based for the greater part on authority, and much less on force [in early states].

H.J.M. Claessen, in *The Early State:* 1978.

Ratnagar (14) also brings forth the argument that the uniformity of brick size and shape, pottery, chert blades, or copper/bronze tools, was not due to 'trade' in these items. Pottery and bricks involve high costs of transport and trade in them would not be lucrative. Also, if such items were indeed traded, there would have been varieties of them, according to their origin and the tastes of customers. The artifactual unity may have been, at least in part, an outcome of the mobility of labor that characterized all Bronze Age polities, instead of the trade in the goods. As far as the Harappan seals being an instrument trade, opinions are now being offered that these were amulets rather than identification marks of the merchant clans.

The concept of the political control through the monopolization of trade in essential materials and products by the state makes a lot of sense but it presupposes a large volume of trade and the extensive dependence of the Harappans on this trade. It is by no means a settled matter: the volume of trade may not be as high as it is assumed to be, and the commercial contacts with other Bronze Age civilizations may not be as intense as we are told to believe. Lahiri (42), for example, argues against any ‘foreign trade’ because all the raw materials were available to the Harappans within their own realm and Chakrabarti (43), arguing in the same vein, considers the overall Harappan foreign trade as ’miniscule’. Thus, in the absence of any significant trade, the basis of control through trade would not hold.

Control Through Police Power and State Violence: A long-accepted attribute of state-level political organization has been the "monopoly of physical force" to control behavior (44). The idea probably arose on the assumption that few "public goods," including basic "law and order," have been privately produced anywhere, anytime. This idea is understandable because the only wellknown case of a long-lived, non-primitive, stateless society has been medieval Iceland (45).

Other scholars dispute this assumption. Webster (38), for example, believes that violence was lacking in early states, and the survey of ethnohistorically documented early states revealed that. Similarly, Claessen (18) states that “the maintenance of law and order seems to have been based for the greater part on authority, and much less on force [in early states]”. In only eight cases [of 21] was some form of police force found.” Yoffee (46) sees the state exercising not a monopoly but a "paramount control" of law and force in a system incorporating numerous semiindependent subsystems”.

Police power is a difficult attribute to trace archaeologically in the absence of documentary evidence. Service (47) points out two possible reasons for this: (a) " ...controls of any sort could be so effective as preventers of crime, feud, and violence as to become invisible to the archaeological investigator," and (b) ...” reinforcement by supernatural means was not only characteristic of the early civilizations, but sufficiently effective largely by itself." There are, however, several pointers in the iconography and art of some early civilizations that would indicate the use of force and coercion in the formation and maintenance of state.

No such indications have come forth from the Harappan Civilization: only one tangible clue and one ephemeral one is provided in the remains of Harappan Civilization that faintly suggest the employment of what may have been an organized constabulary. This palpable evidence comes from Mohenjo-daro in the form of what Wheeler (27) has interpreted as guard rooms for night watchmen "placed mostly on corner sites with their doors in important thoroughfares .... ". Less tangible indication of a possible early police force appears in the Indus script: the sign showing a human figure carrying vertically a long slender staff of a height almost equalling that of the carrier. Fairservis (48) reads this symbol as an overseer. The script sign resembles the traditional *chaukidar* or watchman who still makes his rounds in Pakistani and Indian villages, carrying a steel-weighted *danda,* or staff, or the *thanaidar,* or state trooper, whose primary riot-control device remains the *lathi,* a long, slender but effective bamboo pole (3).

Control through Ideology and Social Norms: The presence of a differentiated classbased polity throughout the Mature Harappan Civilization has already been discussed in the above. That there was a class division at Harappa, Mohenjo-daro, and other urban centers is indicated from the different types of dwellings excavated: those built in large part with baked brick, around relatively spacious

courtyards, with their own wells, bathing platforms, latrines, large rooms and, perhaps, quarters for servants or slaves, may be contrasted with the ‘coolie lines’ at both Mophenjo-daro and Harappa. The discovery of luxury goods, the presence of mass-produced pottery alongside a few excellent specimens of decorative pots, and the like, are some additional indications for a class division.

This evidence is, however, not as strong as some would like us to believe. Although a class difference is no doubt at hand, one has to really look for stark material differences between one section of the society and the other. Superficially, the Harappan society seems to be more or less egalitarian. Given the limited material wealth of the entire society and given the available surplus that could be extracted, this mildness of class division in the Indus cities is not surprising. Despite the absence of a robust evidence for a sharp class differentiation in the Harappan society, however, its existence is not in doubt any more. The controversy is on the basis of class differentiation and the composition of the elite.

” Reinforcement by supernatural means was not only characteristic of the early civilizations, but sufficiently effective largely by itself."

Elman R. Service, *Origins* of the State and *Civilization*, 1975.

There are serious differences of opinion regarding the composition of Th.e ruling class. To take only a few examples, Gordon Childe thinks that a ‘ruling class’ dwelt in the citadels at Harappa and Mohenjo-daro; included among the ruling class were princes, priests, merchants, officials and scribes. Religious beliefs must have played an enormous role in consolidating and maintaining social institutions and economic arrangements and priests, shamans and soothsayers must be important component part of the ruling elite. Some others, such as Kenoyer and Possehl, on the other hand, exclude the priests completely from the category of rulers and give the pride of place to traders and merchants; they occupied the uppermost echelon and were actually the ruling class in the Harappan society. There is disagreement about the social and political standing of urban craftsmen. While some have no doubt regarding urban craftsmen being a part of the ruling class, others seem to diminish their position. Vidale and Ratnagar express the opinion that craft production was under the political control of the urban elites of the Harappan cities.

Whatever the composition of the ruling class, the question is: how this class structure was maintained and what was the method which kept a wealthier class secure against reprisals by those who produced the wealth. Above all, what is the evidence for the existing of this wealthy elite of merchants and traders? In other societies of the time, it was the force of arms that maintained this hold but the Harappan society is generally believed to be devoid of such a violence!

Three alternatives come to mind: First, the religion could have provided the basis for wielding control. The role of religion in shaping and controlling the Harappan state has largely been abandoned and replaced by the notion of ‘ideology’ which acted as a glue that kept the Harappan society together. Possehl has been one of the most fervent advocates of this hypothesis in recent years. Second, there could be a group of ‘monks’

Lacking state religion, state administration and state armed forces, of what then does Kenoyer's or Jacobson's [and Ratnagar’s] Harappan state
consist of ? Only of the word itself stretched far

beyond utility, where social complexity is tautologically equated to a reification entitled 'The State'. Not all inequalities imply the state; even hunter-gatherers have them. Neither do all personal and social status markers imply dominance. Differentiation is certainly necessary to an eventual elite dominance but is not itself sufficient to produce it. So the existence of some marks of differentiation does not prove that a ruling elite has already emerged and imposed itself upon society, controlling it. Differentiation of social categories and the distinguishing of individuals are, however, central to competition between structural units, such as between lineages and clans. Only if one or a few could establish such ascendency over the rest that they could impose their wishes upon the others by legitimated force, would the state have emerged. That just such a clan-based differentiation could produce a ruling class is evident in China.
Charles Maisels, in *The Early Civilizations*

who had willingly forsaken the worldly trappings of society, thereby acquiring extraordinary respect and influence among the people. Second, there is a possibility that the Harappan polity was organized on a heredity-based quasi-caste structure, reinforced by religious beliefs. We find examples of all these systems in historic as well as contemporary Pakistan. In all of these hypotheses, the class has been substituted by a non-materialistic basis for social differentiation.

Ideology as a Lever of Control: Possehl defines ‘ideology’ as the conceptual organization of rules, taboos, laws, philosophy and values. In general, ideology has its function of preserving the integration of the whole society. And it may be that the longer a society is integrated in stable condition, the more adjusted its parts become until no overt constraint is noticeable. Values are set down by tradition and are not usually questioned or even accepted consciously; a child grows up and becomes human among humans. Thus, values are inherently conservative and ideology is preeminently cultural, for ideological values are directly symbolic in origin.

Possehl probably wants to convey the notion that the Indus people had a well-defined set of concepts about human life and culture that they used to set themselves apart from other peoples. This was an Indus institution based on propositions that could be neither affirmed nor denied and this set forth the social and political aspirations of these peoples. The elements of this ideology are expressed in visual and symbolic form in the Indus cities, towns, villages, and pastoral camps. They are manifest in the distinctive Indus artifacts - stamp seals, painted pottery, figurines, architecture, baked-brick buildings, brick-line wells, bathing facilities, new or expanded technologies, and the like. Most importantly, this ‘ideology’ was a glue for social cohesion.

The concept of an ideology as the organizational and governing force is an interesting idea. The continued presence of *janapadas* (the regional ‘democracies’ or ‘aristocracies’) throughout ancient Pakistan and some parts of northern India in the post-Harappan history and the absence of powerful kings throughout the Indus region in later times gives this idea some historical credence. However, these post-Harappan societies were not as complex as that of the Indus Civilization and a strict parallelism between the *janapadas* and the Indus polity would be misleading. Furthermore, a persistent question remains: what was the basic tenets of this ideology and why would the toiling masses subject themselves to such exploitative tenants without the fear of worldly terror which could be inflicted on them for noncompliance?

Willing Subordination: The two localities, Mound F at Harappa and Block 5 at Mohenjodaro, widely identified as 'coolie lines' or 'barracks' have generally been thought of as the domiciles of some subordinated elements of Indus society, probably slave or indented servants of low economic stature. It is quite possible that the inhabitants of these architectural units did indeed form part of an economically subordinated community, but perhaps one which willingly subordinated itself. Such a hypothesis is partially framed by Miller (40), who suggested that the inhabitants of the rooms were more likely to be monks and ascetics than slaves and that 'those who can maintain the greatest distance from ordinary enterprise were granted an authority and power'. Coningham and Manual (49) have further explored this idea taking their cue from historical examples of South Asia.

Indeed, there are numerous examples within the early and contemporary history of South Asia of the power of charismatic individuals who willingly subordinated themselves by renouncing material wealth and temporal position. Such individuals often achieved great influence and power through a number of associated characteristics such as harsh ascetic practices. It is also apparent that the more austere communities

became, the more influential they were, as illustrated by the political dominance of the Sri Lankan *Pamsukulka,* or those 'clothed in rags from dustheaps' during the eighth to tenth centuries AD. It is known that the *sufis* wielded immense power over the populace of Pakistan and northern India throughout history. We see such examples even in modern day Pakistan: since the early nineteenth century up to the end of the twentieth, whenever, the tribal polity of Dir and Swat (in the Pashtun country) became too weak to counter the encroachment of the British Raj (or their successors, the Pakistan Government), the tribal elders brought in some recluse *sufi*, a Muslim monk, to act as their common leader and fought against the British (and later, against the Pakistan Army) under his unified command. After the job was done, this individual again retired in seclusion, away from the trappings of power.

This is not to suggest that such interpretations are fully supported by the data. Furthermore, such an arrangement can in no way form the basis of a stable society, as the Harappan was for such a long time.

A Quasi Caste-Based Society? Attempts are recently afoot to replace 'class' with 'caste' as a basis of social differentiation in the Indus Valley. Iravati Karve, a sociologist, refers to the probability of "something very like castes" at Harappa (51). Following her, S.C.Malik, another sociologist, imagined the 'roots' of caste and the 'perpetuation of caste status by birth' in Harappan society. 'Caste-class patterns', in his opinion, first developed in the socioeconomic organization of Harappan Civilization and the incoming Vedic peoples adopted them in the process of being "Indianized". Romila Thapar, an eminent historians of India, supports this hypothesis in some of her writings when she notes the probability of caste as pre-Vedic system and part of the social stratification in the Harappan culture. Dhavalikar (26) is another scholar who subscribes to this theory. More recently, Maisels (12) argues that caste stratification is an *alternative* to stateordering, providing integration through hierarchy without a compelling and administering center, which is not to say that oppression is absent from the system. He provided a mechanism by which the caste order arose from kinship/occupational groups upon the devolution from urban Harappan society (12).

In the absence of tangible data in the material finds to support a later-day sociopolitical structure can only be regarded as exceedingly speculative. Even the notion of ritual purity may be admitted on the

assumed evidence of the Great Bath at Mohenjodaro and the existence of separate quarters for grain-pounders at Harappa is agreed to, evidence for division of labor and occupational groups on the basis of ritual purity and impurity is wanting. Social stratification on the basis of hereditary ties to certain professions has been a hallmark of the Indian and to some extent Pakistani society for centuries and is distinguished from any other society and it could very well originate in the pre-Vedic period in the Indus Valley. But there is no clear evidence for the continuity of such a system in either the Late Harappan period or their transition to the RgVedic period.

More to the point: how was such a system maintained without an enforcing mechanism? The role of the religious and social norms in maintaining the caste system in the Hindu society is often presented as an example of a "voluntary" submission of the masses to the exploitation of the ruling classes. It is, however, generally overlooked that there has always been the power of arms of the *kshatriya* class behind the enforcement of such a social norm. If we envision such a caste-based system in the Indus Civilization, then we must also agree to the use of violent force or a threat of use of force. A state cannot be sustained on such a "voluntary" structure. Caste can be an enabling factor in the evolution of state in the Indus Valley but not a cause. In fact, historical evidence shows that to sustain a complex caste system, one needs a complex political system, supported by the use of force and coercion. We shall discuss this topic in some more details in Chapter I.5.

COUNTER STATE - A CRITIQUE

The nature, even the very existence, of the Harappan state is controversial and the concept of a unified central Harappan state, so obvious and credible in some discussions, has been questioned in recent years. The 'statehood' of the Harappan realms has been denied by some archaeologists and replaced by a commonwealth of city-states or system of 'micro-states'. Some would even doubt if the Harappan society was complex enough as to evolve into any kind of state; they would consider the Harappan polity a bunch of small and large agricultural chiefdoms, connected with each other through a common ideology and culture.

Charles Maisels is one of these strong nonbelievers: "Long-term effectiveness and cohesion there certainly was, but it was not brought about by state organization. On the contrary, I contend that when the evidence is examined in depth, every single state-defining criterion is absent, especially the 'central force' or commanding centre, and that what produced social integration was the existence of a commonwealth, the developed form of the mutually beneficial interaction network first seen in the Halafian sphere" (12).

Thomas Thompson is another advocate of the Harappan Civilization as a stateless society. In one of his articles (50) he showed that ".....in early antiquity a whole group of interacting urban societies, almost certainly lacking the state, existed for approximately seven hundred years; that merchants specializing in long-distance trade organized the production of the largest-scale public goods; and that an unusually early emergence of long-distance trade probably produced these societies. My analysis (albeit of a single civilization) suggests strongly that the extreme frequency of state organization in civilized societies has been, in a perfectly straightforward sense, an accidental feature of our world's development."

These and other views that question the Harappan society organized as a state are the subject of the next two chapters. It will be shown there that the status of the Harappan Civilization organized as a state is debatable. It lacks several characteristics of a state and has little evidence other than inferences

from limited archaeological evidence.

Conclusion: In this chapter we have argued that the Harappan Civilization was a centrally organized territorial state. It has been shown that despite the absence or near-absence of as robust archaeological record as that, for example, of Mesopotamia, the status of the Harappan Civilization as a state-level society cannot be rejected out of hand. The cities like Mohenjo-daro and Harappa could not have been maintained without the existence of a state structure, even if it was confined to the city walls. The argument is not whether the Harappan was a state-level society but whether it was a centralized territorial state or a collection of a few city-states.

The formation of state is considered a necessary component of civilization. Indus civilization is peculiar in this respect. It is not that a state or a collection of states did not exist, it is the trappings of a state – developed bureaucracy, war machinery, palaces of the kings, state-sponsored temples, tombs of important personalities, etc – that did not exist. The Indus state seemed to be something of a faceless sociopolitical system, which differed from those of Mesoportamia and Egypt. Individuals, even prominent ones, do not readily emerge from the archaeological record, as they do in Mesopotamia and Dynastic Egypt, for example. There are no clear signs of kingship in the form of sculpture or palaces. There is no evidence for a state bureaucracy or the other trappings of "stateness." Nor is there evidence for a state religion as large temples or other monumental public works.

An important aspect of any sociopolitical system is the dependence of its people on the city for cult services or exotic goods or craft items or the settlement of disputes, but also how the constituents were held together by diverse and multiple threads. We are impelled to explore the collectivities, the institutions of social integration, and the interrelationships that gave this civilization its coherence. This facet of the Harappan Civilization has, however, not been studied with any depth and conviction .

There is a certain amount of debate over the issue whether there was a single state or several in the Harappan period. S.P. Gupta, B.B. Lal and J.M. Kenoyer prefer to think of several citystates in the Greater Indus Valley in the 3rd millennium BC, with Mohenjodaro at the center of one, Harappa of another, and similarly with Rakhigarhi, Dholavira, Ganweriwala and so forth. This conception largely rests on a backward projection of the recorded evidence of city-states in the Early Historic period, and on what they perceive as the appearance of autonomy and a distinct regional identity for the large urban centre of the Harappan civilization. There are some other scholars who would talk about the Harappan citystates rather than a single or more regional states. There are still others who would outright deny the possibility of any state-level organization in any Harappan city.

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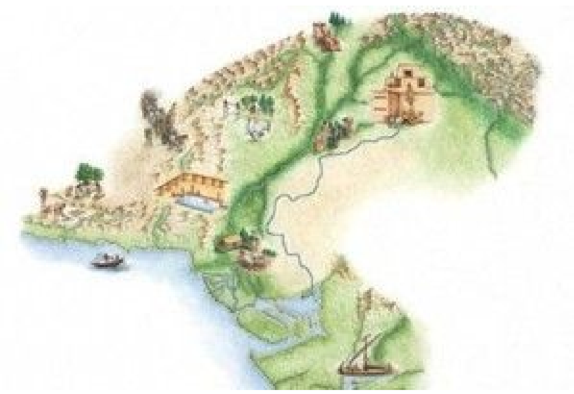
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Chapter I.4.

An ‘oecumene’ of the Harappan City-States?



In the last chapter we argued for a centrally organized territorial Harappan State. In this chapter we explore the possibility of the evolution of cities as independent state structures. It will be shown - in contradiction to the traditional concept that the earliest states emerged from chiefdoms and were territorially extensive - that most of the first states were not large, but evolved as small "peer-polities" (1). For example, in early Mesopotamia or among the Maya, there were many relatively small city-states or microstates, that were hardly ever politically unified but whose central symbols of statecraft were shared. We shall argue that the Harappan society most likely consisted of such city-states.

One of the bones of contention in Harappan archaeology is the nature of Harappan urbanization and settlement pattern. One school of thought considers the Harappan urbanization as allpervasive phenomenon in which all communities, urban or agrarian, are integral partners in the urbanization of the Harappan polity whereby the cities provided certain goods and services to the surrounding villages and the villages, in turn, provided the food and labor to the cities. In this scenario, the cities served as the center of state power and control, in the capacity of a regional administrative centers of a centralized state or the capitals of a regional states. The other school of thought conceptualizes the villages and cities as autonomous entities, practically independent, economically as well as administratively, and not interdependent on each other.

Although the concept of autonomous villages as precursors of Harappan cities is not yet given much weight in elucidating the process of state formation, quite a number of archaeologists have intuitively offered their doubts about the nature of the Harappan society as a centrally organized territorial state. Maisels (3) is one of those scholars, who would rather conceptualize the political organization of the Harappan society in terms of city states. He allocates the Harappan Civilization the status of an ‘oecumene’ (commonwealth) of autonomous city-states and independent agro-pastoral villages. In this chapter we shall examine this issue in some detail. Our primary concern will be the political organization of city life as city-state and see if this model explains the political organization of the Harappan society any better than a centralized all-pervading state.

Cities and the Urban Centers: Cites were features of all early civilizations. Contrary to a once fashionable belief, there is no evidence of a 'civilization without cities' (4), and this includes the earliest civilizations in which, instead of cities, there were supposed to be 'ceremonial centers' inhabited only by a few priests, where people from the surrounding countryside assembled periodically for religious observance (5). Nevertheless, the nature of ancient cities varied considerably.

Towns and cities were once defined as communities of mostly non-food-producers with a minimum of 5,000 people or a population density of at least 386 people per square kilometer, but such definitions have been abandoned. The Indus cities are particularly not amenable to be defined in such a way. There is strong evidence that the residents of cities did engage themselves in food production and were not exclusively artisans, traders, administrators, priests, and the like. In the Indus Civilization, the population of anyone city probably never rose above 50,000. Although this number is much higher than any other settlement in the greater Indus Valley that has been declared a village, it is much smaller than those of many cities of other Bronze Age civilizations.

The key defining feature of an urban center is that it performs specialized functions in relation to a broader hinterland (7). The largest entities of this sort in early civilizations were the capitals of states and provincial administrative centers. Below these settlements were towns and villages that performed a more restricted number of specialized functions for smaller hinterlands. Yet cities, towns, and service villages are at best arbitrary units of a continuum of size and function, not structurally or functionally distinct entities. Definitions based on arbitrary quantitative divisions appear to bear little relation to concepts used in early civilizations and rarely contribute to a better understanding of urban phenomena (8). One should be particularly careful in applying this general model to the Harappan Civilization because here the ‘hinterlands’ are not clearly visible and the ‘specialized functions’ that these cities performed for the hinterland has never been defined.

Cities were places where the upper classes of early civilizations lived, along with people who generally did not produce food. They were the main locations of high-level political and administrative activities, specialized craft production, marketing, long-distance trade, artistic and cultural achievements, conspicuous display, and religious rituals. With rare exceptions, important temples, palaces, and public buildings were located in urban centers. While these centers usually depended on food produced in the surrounding countryside, they contained all the institutions and produced everything that made the lives of the upper classes distinctive and worthwhile. Major cities impressed visitors by their scale, richness, and architectural magnificence and the grandeur of what went on in them. These attributes stressed the insignificance of the ordinary person, the power and legitimacy of the rulers, and the concentration of supernatural power (9). It is therefore not surprising that the development of cities was strongly promoted by the upper classes, who used them to pursue their personal and collective goals (10).

Again, we need to be careful in applying such a general description to the Harappan cities: the presence of the economically ‘upper class’ is hardly noticeable in these cities; artistic and cultural achievements, compared to smaller settlements, are not any special; there is no display of political power and grandeur; there are no temples and palaces; and there are no public buildings that stand out even at Mohenjo-daro. Furthermore, as said before, there is no evidence that the city population depended on the hinterland for food.

The emergence of a large number of cities in early civilizations have been attributed to their function as religious and ritual centers, but attributing the origin of all the cities of early civilizations to their religious functions is inconsistent with archaeological evidence, and it is not particularly helpful to trichotomize all preindustrial urban centers as regal-ritual-administrative (10). This especially applies to the Indus Valley where cities probably arose each for different reasons: Mohenjo-daro most-likely as a religious center, Harappa a center for commerce, Dohlovira a center of marine industry, etc. The role of these cities was to perform specialized functions in the context of a largely agricultural and

relatively undifferentiated society.

Concentrating a wide range of specialized functions in major centers made it possible to achieve significant economies of scale. If longdistance traders and skilled metallurgists lived in the same community, it was easy for metallurgists to obtain imported metal ingots and to sell or consign their surplus production to merchants for export to other cities. Metallurgists could also hope to find in cities the widest range of institutional and individual buyers for their products. Proximity was also convenient for the upper classes, since it facilitated access to all the goods and services they required and enhanced their ability to monitor specialized activities in ways that increased their power and well-being. The logistical and political considerations that encouraged the concentration of specialized functions in urban centers were the exact opposite of those that, under ideal circumstances, motivated subsistence farmers to live, dispersed in small groups, as close as possible to the land they worked.

Ratnagar asks the question whether kinship values, surviving in the face of newly developed institutions, created conflicts of loyalty, and whether there were conflicts between opportunities for personal political advancement and the demands of the natal clan or tribe. We know that states in many spheres yield sovereignty to other institutions or networks such as patron-client relationships or kinship circles, which function in their entrails to manage matters that states cannot manage. As long as this balance remains, this type of hybrid state can function. However, if this balance is disturbed, the political system collapses. And, as the political disintegration ensues, the civilization based on such a delicate system would collapse.

As Ratnagar points out so effectively in her writings, in this new kind of social situation, while much of sodality and the idiom of kinship survived, there was a ‘institutional provision for the stranger’. Much continued as before in the villages, but there were now also exchanges with the towns and exposure to the demands of the ruling elite for labor service; there were new craft items abroad, new tastes and consumption patterns evinced in the lifestyles of the elite, and new artistic and intellectual norms. Constituent communities ranged, in a ‘folk-urban continuum’, between the tribal village, the peasant village, supravillage chiefdom, the defensive outposts, and the culturally diverse city. Integral to this social formation was the social division of labor, especially manifest in the city where people interacted as people dependent on one another for goods and services.

People came to have many more interactions - albeit momentarily - with others, and to play a greater number of roles in society. This in itself entailed the advent of new phenomena like public buildings and public utilities, high-built ‘citadels’ for elite activity or defense; new mechanisms for communication with non-kin; and methods of recording and accounting, the last entailing the use of writing, one of the most momentous of human inventions. Seals were devised as marks of identity and authority in the world in which exchanges were not always with known persons, and generally of an impersonal nature.

Civilizations incorporate diverse ethnic entities and multiple language groups, and the diverse groups are potential adversaries. For even as culture integrates, in giving a group its distinctiveness it also separates. Specific religious practices, art styles and languages incorporate members into groups but equally exclude others. The early state, however, represents a fledging ‘civic society’ in which people had to develop skills of communication and to learn to respect the outsider, and guarantee him safety and basic amenities. While Bronze Age village groups would have held together because of kinship

through common ancestors, group ownership of land, pasture grounds and forests, working and eating together, and common cultural values, this does not mean that we can insist on their innocence, social harmony, or idyllic character. Tensions, economic problems, distrust and violence, must also have been played their part. While the egalitarian ethic prevailed, in actual life under a state organization, some individuals with more drive and ambition than others could have sought to advance themselves.

A distinguishing feature of cities is that they are homes to diverse social groups that are drawn to them as major centers of economic, political, and ceremonial life. We know from excavations that during the Harappan Civilization, a substantial portion of the Indus Valley population lived in densely packed neighborhoods and engaged in diverse occupations. Although Harappan society was largely agrarian, many specialist craft producers lived in the city. This diversity in cities had social as well as economic and political dimensions. This is, however, not to say that such special craft producers did not live in settlements that have been characterized as villages. Archaeological evidence, especially from Allahdino, Balakot in Sindh and a few other small settlements in Gujarat, in fact indicate a hefty presence of artisans even in small communities.

Villages are, compared to cities, often small settlements. The size is, however, not a sole determinant of the economic nature of the settlement, For instance, archaeologists regard Chanhu-daro a city and Mehrgarh, a much larger settlement nearby, a village. Similarly, Harappa is considered a city during the period of Mature Harappan Civilization but the same settlement a village after the Indus Civilization had gone into decline. Then, how does an urban civilization culture differs from that of a village? The answer lies in class society, specialization in economic activities, and the degree of aggregation of population.

A city not only differs from a village in size and subsistence activities but also in its organizational character. It also differs from a village in its *raison d'etre*. While the primary purpose of a village community is to produce food, for a city it is only a subsidiary occupation. To quote Ratnagar, "a city is a node where population chooses to concentrate, to create a settlement larger and more dense than most other contemporary settlements, not to make food production more efficient, but because of an engagement in nonsubsistence activities such as crafts or trade, administration or ritual services" (11). Yet cities, towns, and service villages are at best arbitrary units of a continuum of size and function, not structurally or functionally distinct entities. Definitions based on arbitrary quantitative divisions appear to bear little relation to concepts used in early civilizations and rarely contribute to a better understanding of urban phenomena (10).

Ultimately, a definition of the city rests on interactions of utility between strangers. City life is thus qualitatively different from life amongst kin in a tribal village. The best example of this contrast is provided by the street drainage system of Mohenjo-daro. Drains or gutters, some of them no more than twenty-five centimeter wide so that they could be covered by available bricks, were dug into the streets either just below street level or, say, half a meter below. They ran along the streets for the discharge of dirty water from individual houses. Street drains met other drains so that the combined waste was ultimately discharged into sumps at a few points in the city, or perhaps outside into the plain. For such a system to work, (i) every household would have to be incorporated; (ii) the system from start to end would have to have the requisite overall slope - at Mohenjo-daro it was on average two centimeters to the meter; (iii) no extra-steep gradients or repeated sharp angles in drain alignments would do; and (iv) the system would have to operate continuously in a sustained fashion.

For example, cesspits, provided at intervals along a drain to take and retain solid matter, would need to be cleared out regularly. All this meant that the drainage of Mohenjo-daro was a public utility. It was not something individual households could create piecemeal on their independent initiative. A street drainage system needs to be constructed on a preconceived plan and needs to run as an extrahousehold facility. Thus, in many ways, the Harappan cities embodied the great transformation that had occurred in economic, political and social life, which the purely agricultural village of the past would not be able to do. Again, it is not to say that such facilities were nonexistent in smaller settlements. Rudimentary drainage systems have been found in smaller ‘towns’, the street planning is indicated in some settlements of the Early Haraoppan settlements, and the two-tier settlements of the Harappan Civilization has been a feature borrowed from Early Harappan villages.

Within the cities of early civilizations, interaction among different social groups (such as kingroups, especially strong in the countryside), economic groups (such as merchants), military cadres, court retainers, and others was intensified. The rules of interaction were displayed prominently in the performance of rituals and ceremonies that commemorated royal achievements and recognized the status of courtiers and retainers. These ceremonies legitimized a changing world as being in harmony with an unchanging and given cosmos. Rulers conducted these ceremonies throughout their realms, enacting the drama of citizenship, and some ceremonies were conducted in other cities that shared the common belief system and so reinforced the common cultural currency that bound them and restricted this identity against others. Cities were not simply "containers" for a new scale of social and economic and religious activities but were "generative" of new offices and ranks, a new environment of buildings, streets, and monumental art of various sorts. The density of social interaction in cities was unprecedented from earlier times in most of the earliest civilizations (2). For the Hsarappan Civilization, there is a dearth of archaeological data and no written records. We, therefore, do not know about the nature and the extent of such social interactions.

Social heterogeneity and highly segmented roles of population are typical of city life. Kinship identities are known to have survived in Bronze Age cities but kin relationships cannot possibly order the interactions among residents of a city of several thousand inhabitants. Worship at the city temple, or a common reliance on an urban drain age system, or the requirement of traders and administrators of particular goods and services, would bring people into repeated and fleeting contact, irrespective of ethnic or descent identi ties (12). No doubt, the Harappan urban society experienced such a transition also.

Closely related to cities is the concept of urbanization in which cities play a prominent role. In an urban society the population is spread un evenly over the region and some people aggre gate or cluster in a few settlements (cities) that are much larger than the rest. Thus a settlement size hierarchy takes form in which smaller popula tion nodes (villages and towns) get organically

connected with the larger nodes (cities). These urban relationships grow largely on economic in terdependence between the city and the sur rounding areas of villages and small towns.These factors would make a society much more complex and this complexity cannot be sustained unless regulated by certain rules, and the imposition of these rules are not possible without a mechanism of ‘state’, however rudimentary that ‘state’.

Although such an organic ‘connectedness’ is true for most of the early civilizations, there is little evidence for it in the Harappan Civilization. The Harappan settlement pattern is quite different from that generally noticeable in other early civili zations. While a three- or four-fold settlement hi erarchy is noticed in most state-level societies, in the Indus Civilization we notice only a two-tier settlement - a few large cities and a number of randomly located small villages.

Apart from this unique settlement pattern, the Harappan society has differed from other



Egyptian pyramids - a symbol of power and influence

Autonomous Agricultural Communities and Self-sufficient Cities: Despite a tremendous amount of research conducted on the Harappan cities during the past century, one of the greatest challenges to Indus archaeology still remains is to create a clear sense of Harappan urban institutions. For example, we know almost nothing about the form of the political arrangement through which the Harappan cities were governed. Yet, we can reasonably infer that there was a political organization of some kind. We know very little about the form the economic institution took and yet we know that imports were made from all around from the West, even from across the sea. We marvel the remains of the large Indus cities like Mohenjo-daro and Harappa and are aware of the villages that surround these

cities, yet we know little about the nature of their economic interaction. Above all, the inner workings of these complex aspects of the Harappan economy Bronze Age civilizations in several aspects, such as the composition of city and village populations, nature of villages, and the degree of integration of village economy with that of cities. First, the material culture of cities in most of the early civilizations is quite different from that of villages, which surrounded these cities. In the Harappan Civilization, on the other hand, this is apparently not the case and the material culture from small settlements, such as Allahdino and Balakot, is practically the same as that of larger cities, such as Mohenjo-daro and Harappa. Second, the large Harappan cities do not seem to depend for their food on the smaller villages, randomly located in the region. In fact, archaeologists like Fairservis believe that the people of Mohenjo-daro, Harappa, and other urban centers were equally engaged in agriculture and animal husbandry as those of the smaller settlements. This invites us to look at the Harappan society from a different angle.
and role of the cities, towns, and villages in it completely elude us.

To what degree the Indus cities, such as Mohenjo-daro, Sutkagen-dor, Chanhu-daro, Harappa, Kalibangan, and Lothal, had control over the peasantry around them, or to what extent these villages were connected to the city in their midst? To what degree the argo-pastoral communities were economically self-sufficient and autonomous entities, and to what extent the cities did not depend on the surrounding villages for food and labor? Above all, does the settlement pattern support the either contention? These are the questions that have been posed by many archaeologists studying the region and form the basis of an active debate. This debate is important. If we subscribe to the notion of an organically connected cities, towns, and villages in the Harappan realm, this leads us to a centrally organized territorial state. On the other hand, if we lean more toward the concept of autonomous cities and villages, we ultimately reach a political arrangement that what Maisels calls an 'oecumene' of the Harappan City-States (3). Since the archaeological data are not sufficient or are not clear, comparative studies are often evoked in such discussions.

To start with, scholars in their study of early civilizations have identified isolated cities that did not interact with the surrounding countryside but these are rare. In the more typical pattern, the city exists as a seat of authority, an attraction to the rural population, and a potential source of refuge and services. Cities, in turn, depend on the hinterlands for food and an inflow of people. This pattern of city and countryside interaction has been documented for major cities and the surrounding villages in most of the early civilizations. In almost all cases, the cities were surrounded by a number of smaller settlements, generally in a three- or four-tier settlement hierarchy: villages connected to towns, and towns connected to cities. The Harappan settlement pattern is, however, unique.

First of all, the Harappan cities are not surrounded by an array of smaller settlements, barring the situation in Cholistan where the city of Ganweriwal (a city of Mohenjo-daro's proportion but not yet excavated) is surrounded by a large number of smaller settlements, some residential, some largely industrial, and some merely pastoral camps. Otherwise, and strangely enough, the Harappan cities seem to be standing alone or in the company of only a few smaller settlements.

Second, no clear gradation of settlement size is evident, as is the case in most early civilizations, where settlements can be categorized in three or four classes, depending on the settlement size. Despite the claims of Chakrabarti (15), no such gradation is evident in the Harappan settlement pattern. The data from Cholistan, from which Chakrabarti draws his conclusion and extends it over the whole area of the Indus Civilization, is from surface surveys, not backed by any excavation. It is

also confined to a particular section of a very large area over which the Harappan Civilization was spread.

Third, the number of sites around the large Harappan cities, such as Mohenjo-daro and Harappa, during urban phase remained practically the same as that in the pre-urban period. This goes to show that the Harappan villages existed independently of the emerging urban centers and were not economically dependent on the presence or absence of nearby city, not to speak of any sociopolitical integration with that city.

Fourth, the major Harappsan cities, including Harappa and Mohenjo-daro in the core area, Lothal, in Gujarat, Kalibangan in the Divide, and Surkagendor in Makran, did not have any number of villages nearby to benefit from the services which the cities ostensibly offered in return of food and labor.This shows that Harappan villages were not dependent on the services of the cities and, more importantly, the cities were not dependent on the surrounding villages for their food.

Fifth, the manufactured goods that were available to the city folks of Mohenjo-daro and Harappa, were also available to smaller settlements, even to the tiny settlement of Allahdino on the coastal Sindh. This does not mean that all types of artifacts were being made at all locations but it does mean that all these goods could be procured by all settlements through trade and exchange; no settlement hierarchy or subservience to a nearly city was necessary.

There is an additional, although indirect, factor to be mentioned. The social evolutionary trend that we normally call "urbanization" has often an equally important counterpart, "ruralization", which often becomes manifest in the study of early civilization. In these examples, the countrysides became relatively depopulated as many people became incorporated in the new cities. Subsequently, new villages, towns, and hamlets arose in the backdraft of urbanization. This condition also led to the intensification of pastoralism and nomadism, which flourished not only to supply goods and services to cities but also served as refuges from urban flight (2). No such change is observable in the Indus Valley; the emergence of large cities did not have any effect on the size of the nearby villages, nor do we see the formation of new settlements. This again shows that cities did not have much of a shadow on the villages.

All this boils down to the proposition that either our data is faulty or that the Harappan settlements, large or small, did not in fact depend on each other for their food or for manufactured goods and services. In pre-industrial societies cities were not the abode of artisans, merchants, and other non-food-producing people alone; a considerable numbers of farmers also lived in urban centers. City-dwellers often maintained large agricultural estates, some granted by rulers, but in effect private holdings with obligations to pay taxes to the rulers. Kathryn Keith (16) has shown that urban dwellers in the Old Babylonian period also owned country properties and even houses in other cities, and these "urban" folk may have had their roots in the hinterland of cities. As recently as1910, almost 10 percent of the population of Cairo consisted of full-time cultivators, and in modern day Pakistan a substantial portion of city dwellers are engaged in food production through undertaking small scale intensive agriculture and dairy farming. “Bhaince Clononies” (the keepers of water buffalo for milk production) are a common feature in all major cities of Punjab and Sindh. The proportion of food producers, of course, increases as the city size decreases, to the extent that there is virtually no difference in economic activities between a small city and a large village.

Comparative studies on early civilizations have indicated that when considerable numbers of full-time

or part-time farmers lived in urban centers, agricultural production was intensified on adjacent land to reduce not only transport costs but also the time farmers spent traveling between their homes and their fields. There was also a tendency for farmers who maintained their principal residences in the city to live during periods of peak agricultural labour in temporary shelters or small houses near the fields they were cultivating. In the Valley of Mexico and among the Maya, food was also grown within urban centers in kitchen gardens attached to residences. Even the Maya upper classes had their dependents grow food in gardens that surrounded their urban residences.

In view of the above mentioned settlement data, as scarce as it is, we find the signature of economically and politically autonomous villages and cities in the Greater Indus Valley. This is in stark contrast to the city-centered socioeconomic organization, which is generally evident in several early civilizations. This pattern is in evidence even in the pre-urban cultural landscape. In the Early Harappan period of the Indus Civilization innumerable village farming communities flourished all over Pakistan independent of each other, although many of them were interconnected through trade and exchange. It is logical to presume that these autonomous villages did not disappear with the advent of the Harappan cities or got subsumed to the economies of the arising urban centers. Conversely, the Harappan cities also arose as independent and autonomous entities, not beholden to any village, autonomous or not.

We also notice of a supra-village structure among the Baluchi and Sindhi communities of the Early Indus period and in almost all the known settlement area of the Indus Valley in the Harappan times. The development of vast regional cultures in the Early Harappan period (Kot Diji, Amri, Quetta Ware, Kulli, etc) was not possible without the existence of such autonomous villages and such a supra-village cultural interaction zone. The same pattern apparently continued into the Mature Harappan period.

This is not to say that the Harappan settlements were strangers to each other. The Harappan peasantry around large cities must have participated in one way or another in the new order, the urban setup. But it is doubtful that the Harappan peasants could have surrendered their labor to their regional power structure, centered in the city, and, in return, could have availed of goods or services in the cities or benefited from rituals and cults to the extent that we have been asked to believe in. The laws of governance, the matters of war and peace, and dispute settlement mechanisms of the city elite would have impinged upon rural life to a greater or lesser extent but a rural citizen, preoccupied with agriculture or animal herding, and having its social roots in kin-based structure, was still a member of an independent polity, not a subservient to the city elite and hardly a full participant in the urban life of the city in its midst.

It appears that the cities had a more symbiotic relation with the villages which is clear from the fact that the rise of cities also coincided with the rise in smaller sites in surrounding areas. Their relation with the neighboring areas does not seem to have been hostile or dominating. This is attested by weak external fortification and absence of any evidence of coercive state apparatus or weapons. All this precedes the growth of the polis in Later Rome by more than a millennium but the archaeological similarities are striking and hence a comparison is inevitable (17)).

Notwithstanding the above reservations, the proliferation of settled agricultural villages over a large area of more-or-less homogenous cultures not only in Baluchistan and Sindh but also in Cholistan, indicates a social and economic interaction that surpasses any kin-based arrangements, such as clans

and tribes, although these kin-based units could have existed as constituent components of a village and supra-village organizational system. Furthermore, the spread of the Harappan material culture, as represented by a wide distribution of artifacts in small as well as large settlements, shows that the Harappan people were engaged in extensive contact with each other through trade and exchange. This was most likely the basis of a common culture throughout the Indus Valley.

This situation has some important implications for the rise of state - territorial, regional, or city-centered. This situation also begs the question: Was a state-like structure necessary for the sustenance of this agro-based society with a few cities imbedded in its midst? In other words, was the Harappan society not organized as politically independent city-states, or even as a stateless society, after all?

City-states: Going on the assumption that the Harappan settlement consisted of a few independent cities and a number of autonomous villages, along with equally large number of huntergatherers and nomadic pastoral communities, the question arises: how were these villages, towns and cities organized. There is no doubt that the Harappan communities, including villages, small towns, and large cities, arose on the foundation of kin relationships to a varying degree. It is also true that even a Harappan small village had some degree of social heterogeneity, showing some degree of urban characteristics. This heterogeneity, of course, increased with the size of the settlement; small towns having a more pronounced urban character than the villages, and the large cities being almost fully urban.

The cities, not the chiefdoms or an overarching chiefdom, was the precondition for the emergence of state. In turn, the emergence of the earliest cities occurred as an urban explosion from the modest villages that preceded them. Renfrew, 1986

Of course, something tangible was needed to serve as a glue to keep these myriad groups of individuals together, and more this heterogeneity, the more the need for such a binding force. Cities are characterized by a high degree of social heterogeneity and a weak level of kin-based relationships. The question is, what was the nature of this integrative mechanism, how was it maintained, were the ancient cities a component part of a territorial or regional state or were they state onto themselves, were the surrounding village communities a part of this system, or did they exist as autonomous communities, independent of the city’s economy? We do not have much to go on to formulate a definite answer to these questions but we do have some tangible evidence on the basis of which we can at least speculate.

The commonly accepted evolutionary theory is that the earliest states emerged from chiefdoms and were territorially extensive. These states comprised of villages as well as cities, the state regulating the socioeconomic affairs of all, through force or otherwise, and keeping the urbanization flourishing. Most of the mainstream social evolutionists seem to have regarded cities as place-holders at the top of settlement hierarchies they call states. We have discussed this scenario in sufficient detail in the preceding chapter. Some other scholars have, however, broken away from this commonly accepted notion of the emergence of state and the place of cities in them. They argue that cities were the transformative social environments in which states were themselves created. Thus, according to this theory, the cities, not the petty chiefdoms or an overarching chiefdom, was the precondition for the emergence of state. Most of these states were not large, but evolved as "peer-polities" and were part of larger cultural associations.

On operational level, two types of state-level societies can be recognized:

• Territorial state, described in the last chapter, and
• City-state, to be discussed in the followings. The distinction between these two types of states, as they are associated with early civilizations, rests not only on the size of territories but also on differences in the nature of their urban centers and in their economic and political organization. Each of the civilizations studied so far by social scientists consisted of city states or territorial states but not both. The Indus Civilization seems to be an exception as it has been studied from both angles. In addition, the possibility has been discussed that the road to an urban literate culture in the Indus Valley may have represented a unique achievement in urbanization where state apparatus played a minimal role.

This distinction was foreshadowed when Childe first contrasted the development of civilization in Egypt and in southern Mesopotamia. He noted that in southern Mesopotamia monumental architecture, luxury crafts, and writing had developed within a network of small city-states, while in Egypt similar developments had occurred under the sponsorship of a single royal court, all the tiny chiefdoms and early states that had evolved along the Nile River north of Aswan during the late fourth millennium BC having been untied under the enduring sovereignty of a divine monarch. He attributed this difference to variation in natural settings and in the techniques devised to extract surpluses from peasant producers. This distinction was adopted and extended by Henri Frankfort (18) and more recently by Charles Maisels (3).

This pattern of independently organized settlements, the city-states, in distinction to centralized rule, is documented by a number of comparative studies. For example, Bruce Trigger (10), compared seven early civilizations in which there had been sustained archaeological research and written documentation, either in the form of scribal texts or ethno-historic accounts. They included Mesopotamia, Egypt, China, Maya, Aztec, Inca, and Yoruba. In them, he found that many types of authority were present as self-government or councils comprised of important lineages, merchant associations, temple organizations and various other influential groups, and centered around cities, hence called city-states.

Similar city-states are known to have existed a millennium later in Greece under the broad category of *Poleis*. These *Poleis* all had a democratic organization that was restricted to nonslave, male adults living within the state and the administration was more like a pancake than a pyramid. All this seems similar to what could have existed in the cities of the Harappan Civilization (14).

Hansen studied the cultures of thirty city states (19). Based on this comparative study, Hansen concludes:

“A city-state is a highly institutionalized and highly centralized micro-state consisting of one town (often walled) with its immediate hinterland and settled with a stratified population, of whom some are citizens, some ‘foreigners’ and, sometimes, slaves. Its territory is mostly so small that the urban center can be reached in a day's walk or less, and the politically privileged part of its population is so small that it does in fact constitute a face-to-face society. The population is ethnically affiliated with the population of neighboring city-states, but political identity is focused on the

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city-state itself and based on differentiation from other city-states. A significantly large fraction of the population is settled in the town, the others are settled in the hinterland, either dispersed in farmsteads or nucleated in villages or both. The urban population implies specialization of function and division of labour to such an extent that the population has to satisfy a significant part of their daily needs by purchase in the city's market. The city-state is a self-governing but not necessarily an independent political unit” (19). Although Hansen notes that these characteristics of city-states are "a kind of Weberian ideal type", he privileges the classical Greek *poleis*, from which his ideal is framed.

Colin Renfew (20), basing his generalizations from the Aegean area, described "early state modules" as the characteristically small territories of the earliest states, in distinction to what Hansen calls "country states" or "macro-states" and some recent social scientists “territorial states”. Hansen (19) as well as Yoffee (2) appear to insist on the term "city-state culture." As has been already discussed, however, the term “culture” does not connote a political system but, rather, the social norm within which several city-states (and their citizens) could interact.

The term city-states has long been employed to describe the polities of Classical Greece, Renaissance Italy, and parts of ancient Southwest Asia. More recently, city-states have been identified as the normal form of state or as one of two types of state that prevailed from antiquity until the nineteenth century (19). Citystates were relatively small polities each consisting of an urban core surrounded by farmland containing smaller units of settlement. In territorial states, on the other hand, a ruler governed a large region through a multileveled hierarchy of provincial and local administrators in a corresponding hierarchy of administrative centers.

Many anthropologists do not accept the dichotomy between a “centralized or territorial state” and a “city-state”. The majority of these see civilizations as evolving in a unilinear fashion from something resembling Colin Renfrew’s early state module into city-states, territorial states, and finally empires (21,22). In this scheme, city states and territorial states constitute successive stages in the development of larger and more complex polities rather than alternative forms of political organization that occur at the same level of complexity. Michael Mann (23), who emphasizes the logistical problems inherent in controlling preindustrial societies, argues that small city-states were of necessity typical of early civilizations, although he acknowledges that ancient Egypt and China developed larger and more unitary states at an early period. It has also been argued that the hegemonic patterns in both Mesopotamia and the Valley of Mexico provide examples of city-state systems evolving towards territorial states.

The Greeks were not the only ones who invented the term city-state to denote the political forms of early states. There are ancient Indian and Chinese writings on city-states. Mesopotamian city-states (or micro-states or statelets) are always described with the logogram or semantic indicator "city" or "place" and Maya city-states are all commonly described as such in the archaeological literature of their areas. Historical examples of city-states include the oldest known Sumerians cities of Mesopotamia and Ur, the Phoenician cities of Canaan (such as Tyre and Sidon), the city-states of ancient Greece (the *poleis* such as Athens, Sparta, Thebes, and Corinth), the Roman Republic which grew from a city-state into a great power, the Maya of pre-Columbian Mesoamerica (including sites such as Chichen Its and El Mirador, the central Asian cities along the Silk Road, Venice, Croatian city-state of Ragusa, and many others. However, there is considerable variability among city-states.

City-states rarely occurred in geographical isolation in early civilizations, although in later periods

in Th.e Middle East isolated cities such as Petra and Palmyra developed along trade routes. The territory controlled by a small city-state might be less than ten kilometers across, although exceptionally wealthy or powerful city-states might exceed one hundred kilometers in diameter. Citystates are not territorial but economic units. Trigger claims that carefully delineated boundaries between polities are associated only with modern nation-states, boundaries between early citystates were demarcated by natural features, artificial markers, or walled fortifications. Sentinels or armed guards were often stationed at such frontiers. Most city-states had populations of between five thousand and twenty-thousand people, but some hegemonic city-states were considerably more populous (10). The whole unit, city plus hinterlands, is relatively self-sufficient economically and perceived as being ethnically and linguistically distinct from other similar state systems. Such a city-state, together with its hinterland, followed the same law, and shared the same language, religious beliefs, and the ways of life.

City-states were generally small enough that all the leading people knew one another personally. While each city-state could have been headed by a monarch, royal powers varied widely from one civilization and one state to another. In general, power tended to be shared to varying degrees among different institutions, as well as among the heads of leading families and the wealthiest people, who were often the same individuals. Policies were decided and issues resolved in councils. Within these cities, local assemblies were constituted by community members and traditional leaders, often those who still maintained ties to the countryside. These assemblies exercised judicial privileges, settling disputes among community members, and could stand in opposition to the palace and royal court (2).

In the Mayan area, cities were temple complexes, and the great bulk of the population was dispersed. On the other hand Teotihuacan in the Valley of Mexico was a walled fortress city that could probably house the entire population in an emergency. All such early urban centers served ritual functions, and massive temple architecture is the rule. Subsequent increases in size took place through amalgamation of surrounding cities and towns into territorial states or even empires. Military conquest of one city-state by another was almost always involved, and there seems commonly to have been a long period of cyclical conquests and revolts before large imperial agrarian states became firmly established rule.

Houston (24) argues that city-states required secondary administrative centers wherever substantial populations were living more than a day's walk from a capital and that size alone accounts for the presence or absence of secondary centers within city-states. Hence, where individual city-states occupied a small territory or the population was clustered near the capital, there was no need for secondary centers. Thus, in Mesopotamia and to a considerable extent in the Valley of Mexico, city-states tended to consist of urban centers surrounded only by villages. In the Harappan Civilization, there were no secondary centers between the largest cities either.

The distance between city states depended on geography and population density of the region. The distances between the major cities were extraordinarily large - some 400 km - in the Indus Valley but the capitals of adjacent Mesopotamian city-states were often visible from each other's ramparts. In the Valley of Mexico, citystate capitals averaged only 7 kilometers apart. Among the Yoruba, the centers of larger citystates, especially in the more populous south, were located about 40 kilometers from each other, but the centers of smaller polities (which were not always states) were much closer together. Stephen Houston (24) estimates that large Maya centers were 40 to 67 kilometers apart and that the mean distance between capitals and subordinate centers was 11 kilometers.

Despite their cultural similarities, the inhabitants of adjacent city-states did not always speak the same language. The Yoruba spoke a single language that had various dialects, but Yoruba civilization embraced the Ewe-speaking Edo people of Benin. The Classic Maya spoke two closely related languages that are ancestral to Cholan and Yucatec Mayan, currently spoken in the southern lowlands and the Yucatan Peninsula. These languages became distinct from other Mayan languages prior to 1500 B.C., and the southern lowlands appear to have been Cholanspeaking prior to A.D. 1000. Similarly, each Mesopotamian city-state spoke a different dialect, even a different language.

Adjacent city-states were in regular contact with one another. While they were usually selfsufficient in food production, intercity trade was a regular source of the exotic raw materials needed to manufacture luxury goods and sometimes necessities. The closer city-states were to each other and the smaller they were, the more readily regional economies emerged. However, the Indus Civilization does not seem to follow this rule. Here the distances between the major cities were extraordinarily large but the regional economy seems to be robust indeed. Because of their proximity and economic interdependence, city-states also tended to be culturally interdependent and to share religious beliefs, artistic conventions, and symbolism, especially as these related to upperclass culture. Here again, the Harappan society bucks the rule: despite large distances, cultural interaction was extraordinary strong.

In this generalized historical sketch, we have seen that the earliest city-states were independent polities, and the earliest territorial states that were achieved by conquest were highly unstable and ephemeral. City-states, which were uncomfortably embedded in territorial state and imperial structures under Akkad and Ur III in Mesopotamia, revolted whenever the occasion permitted, normally in the transition to new kings of the ruling dynasty. If the ideal, as represented in the "Sumerian King List," was that a single dominant city ruled Mesopotamia at anyone time, the reality was that the earliest city-states succeeded in reestablishing their independence.

The Indus Valley does not seem to be an exception to this process of state formation. Here, as described above, autonomous agricultural villages were an old tradition, beginning with Mehrgarh *ca*. 6000 BC, rather than creating new type of countryside or altering the sociopolitical composition of preexisting villages; the existing villages did not exclusively networked with the newly created urban centers, rather the preexisting networking among such settlements continued and intensified; there is no evidence that the social and the economic roles of non-urban dwellers were in any way tied to decision made in the cities; and the countryside did not get depopulated in no shape or form. In fact, the preexisting rural sites continued to flourish as people got incorporated in new. Pastoralism and nomadism also continued as an important sector of the regional economy. All in all, it appears that the Indus cities, as large as they were, had very little impact on the basic socioeconomic structure of the countryside. If they were the city-states, they were the state to themselves.

Mesopotamian Model: Mesopotamia and Harappan societies have long been compared throughout the history of archaeology and this comparison is not unwarranted. As early as the 7th millennium BC, exchange networks connected Near Eastern communities with those in the Iranian plateau, Turkmenia and Baluchistan; these are marked by the presence of Near Eastern domestic plants and animals right across the region



and by the distribution of such materials as obsidian, turquoise, seashell and lapis lazuli well outside their source areas.

This evidence suggests that Mesopotamia and the Indus Valley must have had a cultural impact on each another. Besides the element of a cultural infusion in each direction, there was the similarity of ecology between the Euphrates Valley and the Indus plains - both areas a part of a huge muli-regional desert, and both irrigated by two large river systems, the Euphrates, and the Indus, respectively. The subsistence economies were, therefore, the same.

By 3000 B.C., Sumerians, in southern Mesopotamia, had built a number of cities. The cities of Sumer were usually surrounded by walls. The Mesopotamian civilization was known for its creativity. They are said to have invented the arch and the dome and they were able to build some of the largest brick buildings in the world. This was not very much different from the architectural techniques of the Indus cities, as evidenced by Mohenjo-daro, Harappa, Chanhu-daro, Kalibangan, and other minor cities. Both of these regions had a little stone and wood to be used as building materials. The regions had plenty of mud that could be utilized for by the construction of residential and monumental buildings. The Indus people predominantly used baked bricks but in Sumer their use was rather sparse.

.....cities were the transformative social environments in which states were themselves created.

Agricultural settlement is documented in southern Mesopotamia by at least the fifth millennium B.C. For the Uruk period, between 3500 and 3200 B.C., there is evidence of increasing social stratification, organized warfare, urban centers, and a city-state system. There is also evidence of large public buildings, monumental art, bronzecasting, cylinder seals, and the earliest recordkeeping. In Mesopotamia the average city-state was probably 40 kilometers in diameter, about the same size as Renfrew's early state module.These city-states were located near to each other, all along the river

Euphrates.

Mesopotamian city-states were multi ethnic communities. Sumerians, Akkadians, Amorites, Kassites, Hurrians, and many other named social groups - the names themselves refer to languages rather than ethnic groups, in the strict sense - lived together in Mesopotamian citystates. Although the city-states provided identifications of citizenship, ethnic relations that transcended city-state boundaries could be mobilized to advantage in the struggle for power within citystates (In ancient China there are similar cases of ethnic and linguistic diversity in early cities.)

Possibly beginning as early as the Uruk period, the inhabitants of some thirty city-states recognized southern Mesopotamia as a region (*kalam*) that possessed cultural unity, although it may already have been seen as divided into a largely Sumerian-speaking region *(kiengi)* in the South and an Akkadian-speaking region *(kiuri)* in the North. From early times the temple of Enlil in Nippur, a city that marked the division between these two territories, may have been, if not the centre of a league of city-states, at least a neutral location where representatives of these city-states could meet to regulate their affairs. A city-state system persisted in southern Mesopotamia for over fifteen hundred years, until lasting regional unification was brought about following the Old Babylonian dynasty.

Sumerian civilization emerged as a cluster of small urban settlements each of which was independent and autonomous from the others. Each city-state maintained and controlled a surrounding hinterland to generate food resources necessary to sustain its population. As discussed above, the Indus Civilization also arose as an aggregate of urban settlements each of which apparently independent and autonomous from the others.

There are, however, some stark differences. And these differences are worth noting. To start with, there is a difference in settlement pattern. The Mesopotamian cities were closely packed, situated in a linear fashion along the rivers - at distance rangin from 10 km to 25 km. The Indus cities, on the other hand, were located far from each other - as far apart as 250 to 600 km from each other - situated along different rivers but at strategic locations.

Second, there were often wars between neighboring city-states. As the city-states of Mesopotamia began to grow, their spheres of influence overlapped, creating conflicts between them, especially over land and canals. These disputes are recorded in tablets several hundreds of years before any major war - the first recording of a war occurred around 3200 BC but was not common until about 2500 BC. At this point, warfare was incorporated into the Mesopotamian political system, where a neutral city may act as an arbitrator for the two rival cities. This helped to form unions between cities, leading to regional states. In the Indus Valley, no evidence has been found for intercity strife. The Indus cities were separated by vast stretches of open desert along the Indus River where nomadic tribes roamed and there was apparently enough fertile land available for each city to expand and there was no need for a warfare. The geography and the demographic pressures of each civilizational area had a profound impact on the political development of the region.

Third, at the center of each Mesopotamian city-state typically was a temple complex, directed by priests or *ens* and dedicated to the cult of the city's patron deity. The patron deity of Nippur, for example, was the Sumerian sky god, *Enlil*. This relationship between city-state and patron deity was viewed as so significant that whoever dominated Nippur, controlled all of Sumeria. Priestly authorities claimed the ability to mediate with divine entities, thereby obtaining religious sanction for human endeavors such as farming and related matters such as the need for favorable weather and the

avoidance of floods and earthquakes. Priests also claimed to possess the power to channel harmful supernatural energy toward their adversaries. In short, the earliest Mesopotamian societies appear to have been ruled by priests.

No sooner had stratified societies emerged in Mesopotamia, however, than political power began to shift elsewhere, particularly as inhabitants came to acquire independent assets. Vague authorities referred to *aenlils* began to emerge, and more significantly, military warlords named *lugals*. Perhaps recruited originally by priestly authorities to address the threat of border wars with neighboring communities, *lugals* quickly exploited their military power to seize control of their respective communities. Establishing themselves as formally sanctioned monarchs, *lugals* drew on popular support within their cities to supplant rival religious authorities with more pliant representatives.

The social and political power structure of the Harappan cities do not appear to be like that of the Sumer cities: the archaeology does not support such a similarity. There's no artwork or architecture that seems to be associated with rulers, certainly not with individual rule over the community. Instead, it appears likely that leadership in Harappan communities functioned quite differently than it did in Mesopotamia.

Finally, and most importantly, the Mesopotamian was an overtly differentiated and strongly stratified society, where one class is superimposed on the other. This situation, as evident from archaeological record, is nowhere to be seen in the Harappan cities in such a vivid fashion. Social differentiation must be present but it is not seen clearly in any material symbol. Despite a huge amount of work done in the past half a century, no one has yet been able to spot a 'ruling class' in any city in any region of the Indus Valley.

The Harappan City-states: Although the concept of a centralized Indus state, ruling all Harappan cities and villages, has not been completely put to rest, a consensus seems to be developing in recent years which negates the Harappan Civilization as an overarching, centralized state but what Maisels (3) calls an 'oecumene' (commonwealth) of city-states, bound together in a common culture and a common historical development but otherwise independent political entities. As detailed above, we find several examples of such a proposition in the ancient world. In early Mesopotamia and among the Maya, for instance, there were many relatively small states - city-states or micro-states - that were hardly ever politically unified although they shared a common "ideology" or the cultural mix. This common ideology that stretched over politically independent city-states was marked in material culture and literature and played out in economic and political interactions among the independent city-states. This is in contradiction to the position of the early excavators, starting from Marshall and Mackay, and a whole line of later interpreters of archaeological data, including Piggott and Childe, and some recent scholars such as Ratnagar, Jacobson, and Kenoyer.

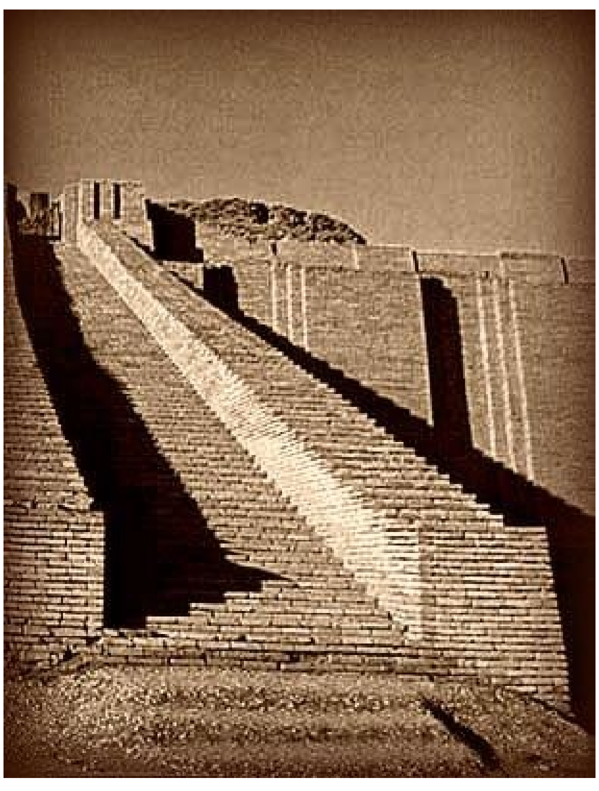
Maisels envisages the Harappan society as an *oecumene* which consisted of disparate, overlapping and interactive spheres of authority: economic, political, religious and, only derivatively, territorial. "Perhaps it is the identity of limited territoriality that the seals, with their inscriptions, represent. And, one of the functions of the 'Doge of Mohenjo-daro' (if such a person there was) could have been the establishment and monitoring of the famously standardized system of weights and measures" (3). This probably means that a few city-states emerged in the plains of the Indus and these cities gradually incorporated with them some limited areas of pastoral and agriculturist villages around them, thus forming "ministates".These city-states or mini-states were culturally integrated with each other and

existed within a common cultural landscape, displaying a remarkable homogeneity in the material culture. In one form or the other, a number of scholars, such as Yoffeee, Possehl, Fairservis, Shaffer, Gupta, and Lal, advocate this concept and many more subscribe to it without explicitly advocating it.

As a corollary, Maisels (3) extends this a little further: each of these city-states expanded westward and eastward, incorporating within their influence additional areas but creating in this process a certain degree of heterogeneity at their fringes. This process of expansion could have resulted in the formation of a unified state but before such a stage was reached, the whole cultural mix was disintegrated and the civilization came to an end. It is surely an interesting and theoretically tantalizing thought but it goes against the basic hypothesis of this chapter, that is, the concept of territorially limited city-states and autonomous agricultural villages as the foundation of the Harappan society.

How were the Harappan Cities Governed? Assuming that the Harappan society consisted of autonomous villages and independent city-states, how were they ruled? Well, the Indus settlements were not really ‘ruled’; they were instead ‘governed’. Ruling demands a central figure, such as a king or a warlord, having sufficient coercive means at his disposal to coerce the populace obey the laid-out rules. ‘Governing’, on the other hand, could take several forms, such as an elite group of merchants, a college of priests, a circle of holy men, a religiously ordered hierarchy, a system of mutually competing kin-groups, even an ‘ideology‘ to which all and sundry subscribed.

This leads us to the question: What was exactly this governing body that made rules and ensured their compliance. For the emergence of such a body, one needs a group of people who are economically privileged or who are superior to the general masses on the basis of one criterion or the other. This begs the question: Haw far was the Harappan polity differentiated and stratified and how the various social strata interacted with each other to make this governance possible? Furthermore, since urban civilization is ostensibly not possible without a class structure, the question arises as to how this class-structure was composed of? What was the method, which kept a wealthier class secure against reprisals by those who produced the wealth?



Ziggurats were massive stepped towers that the Mesopotamians built temples on, signifying the power of the religious elite

As has been discussed in the preceding chapter, every known class-division is believed to rest, in the final analysis, upon the use of force whereby the surplus produced by one class of people is expropriated by a ruling minority. The need for violence may be reduced to a minimum if the class of producers can see no other way of making a living except under the direction of the upper class. The harsher the exploitation, the greater the need for repressive force, "for men will not always starve in quiet without protest", as Marx or Lenin said. But there is no overt signs of a 'wealthy' class, no evidence of differentiated residential homes, and no uneven distribution of prestige goods. Furthermore, there is little evidence of state violence. All this leads us to believe that the Harappan ruling class must be differentiated on the bases other than wealth and the need for force was mitigated by an ideology that encouraged voluntary submission. The quasi caste system could be one.

So far, there has emerged no solid opinion who these people of power and influence, the governing elite, were in the Indus cities. Kenoyer has made the most specific suggestion that people who rose to great prominence in a city's commerce, along with priests, effectively *were* the government. They are understood to be suppliers of diverse public goods, *not* as the ruling body but handling their society's affairs through the control of trade and religion, rather than military might. Given the obviously commercial character of Harappan cities, and given a well established tradition of control by traders and merchants in historic Pakistan, artisan guilds and elders of 'respected' families in modern-day India, Afghanistan and Pakistan, the idea of a top elite composed of trade and religious leaders is certainly plausible in the Harappan Civilization. However, it is not at all clear what sorts of trade (or traderelated) goods and services they might have manipulated so handily. The current working of the merchant elite in modern cities of the region is no guide because of the changed mechanism of trade and transportation.

Kenoyer is partly inspired from later historical descriptions of some South Asian city-states where the community affairs were handled by an elite group (the *rajas*), who were arranged hierarchically within their own group but jostled for power within the city-state. He not only models Harappan city-states from the much later citystates but considers the later cases to be historical developments from the earlier Harappan culture. Kenoyer suggests that the "authoritarian model" of Harappan Civilization must give way to one of competing elites within city-states, as was the norm in the post-Harappan states - the *Janapadas* of the first millennium *BC* in Punjab and probably also in Sindh. In such a structure, Kenoyer gives the preeminent place to the merchants and traders. This is, however, a debatable proposition, to say the least.

First, it assumes that there was a discrete section of the society whose members were full time merchants and traders and who functioned as a discrete interest group. Second, it assumes that the volume of trade was so high as to give the traders and merchants a real power to influence the governance of the city. Kenoyer, along with some other archaeologists, such as Ratnagar, During-Caspers, and Possehl, puts a lot of faith in trade without considering its volume. This much touted trade, even in large cities of Harappa and Mohenjo-daro, could not be more than simple and infrequent exchanges between neighboring villages and towns. The long distance trade was even less.

One seems to forget that the Harappan society was primarily agrarian and pastoral, and this applies to those living in the cities. In the absence of really high volume of trade, the merchants and traders

could not have acquired any significant power and influence.

In the governance of all early states, whether territorial or city-based, religion played a prominent role. Religion, rituals, divine edicts, superstitions, and taboos were everywhere effective tools in the hands of the ruling elite for keeping the masses in their place. Often, the religious elite was itself the governing elite of the state. Divine powers were ascribed to monarchs who ruled the extensive territorial states in early historic times. These powers, however, seem less extensive in city-states as a ruler's personal strengths and weaknesses were familiar to everyone.

In the Indus Civilization, we do not see any overt manifestation of religion in the service of state, but it is assumed that it could not be any different from that in other early civilizations. Superstitions, powerful taboos, religious beliefs, ideas of supernatural punishments and rewards, could have been very well used as the substitute of force in helping the ruling class - whether wealthy merchants or the priests themselves - for exploiting the productive masses. Often, this means the use of religion to convince the working class that they must give up the surplus, lest supernatural forces destroy them by mysterious agencies.

Closely related to religion is the idea of ‘ideology’ or a sense of group identification that acted as the glue for keeping the city-state functioning and rendering the evident cultural homogeneity possible. Indeed, it does seem that there was a certain system of common ideas which prevailed over a vast area not only in the main Harappan region but also in the neighboring areas beyond the Harappan sphere. It is said that the social control and disciplined behavior was maintained through these social norms and values, rather than by political coercion. This is a very nebulous thought because no one has so far been able to describe this ‘ideology’.

Norman Yoffeee (2) argued that the earliest states were made natural, that is, legitimized, through central symbols, expensively supported and maintained by inner elites who constituted the cultural and administrative core of the social order. Ideologies of statecraft also set the rules for how leaders and would-be leaders must guard these symbols and perpetuate the knowledge of how to maintain, display, and reproduce them. If we follow the example of Mesopotamia, these symbols of identity and power should be specific to each city-state. Such a diversity in symbolism is, however, absent in the Harappan polity.

The idea of caste system as a foundation of the Harappan society is also getting in vogue in recent years. In fact, the caste system can be construed as a concrete example of ‘ideology’, mentioned above. The concept of caste, *Zaat*, or *Jati* underpins a number of social aspects of the present-day India and to some extent of Pakistan, Bangladesh, and Nepal. While it is not advocated that such an elaborate and all-pervasive caste system as it exists in India existed in the Harappan society, such a system might have constituted the foundation of the Harappan social stratification, at least in its outlines. If it did, it could have been a very effective means of control of the cities’ power structure.

Another idea that has surfaced most recently in the Harappan context is that of *heterarchy* instead of *hierarchy* as a social foundation for its political structure. A heterarchy is a system of organization replete with overlap, multiplicity, mixed ascendancy, and/or divergent-butcoexistent patterns of relation. A hierarchy, on the other hand, is an arrangement of items or people in which they are represented as being "above," "below," or "at the same level” as one another. A concrete application of heterarchy in the Harappan context is perhaps the Kenoyer’s concept of city elites competing for power and influence, referred to above. We shall return to this topic in the next Chapter.

A lot has been written on paramount uniformity in the Harappan culture, and question is posed as to how such a cultural uniformity was achieved without a central state and how a number of diverse city-states could foster such a cultural homogeneity. The problem is often considered in isolation and it is generally overlooked that the forces of homogenization were not the outcome of the Harappan development. In fact, this uniformity in artifacts, architectural style, town layouts, etc. were manifest over large areas even before the Harappan Civilization started to be in sight. These forces of homogeneity and cultural interactions were so strong that they were getting obvious in the remarkable integration of cultures that preceded the onset of Harappan Civilization. We are not concerned here as to the nature of these forces; for us important point to learn is that all this was happening without the existence of a centralized state. Whatever these forces were, the rapid expansion of internal and regional contacts were bound to accelerate the process. Add to it the process of the steady expansion of the settlement area from the core Harappan nodes and the important role of the nomadic population which continued to cross-pollinate the regional cultures up to very recent time. For these processes to happen, no territorial state was needed (26).

Finally, there is the question of war and peace in context with the Harappan cities. The question is often asked that if the society rested on city-states, then why these city states did not compete for resources, just like those in Mesopotamia and other early civilizations? This is indeed a weak point of the theory of city-states as the foundation of the Harappan political structure. A partial answer is that the Harappan city-states were situated far apart from each other and hence had a vast area to expand, if they wanted to, without any resistance.

Summary: In the early civilizations there are examples of territorial states as well as citystates, the latter more common than the former. A strong case has been made for a Harappan territorial state by some archaeologists. These arguments have already been summarized in the foregoing chapter. No such attempt has so far been made for a commonwealth of city-states in the Greater Indus Valley beyond some inferences from other early civilizations outlined in the above. The present chapter summarizes these inferences.

Our survey of cities in the Indus Valley and some other early civilizations refers to particular historical trajectories and it shows that in every region of the world where the first states appeared, cities were the collecting basins in which long-term trends towards social differentiation and stratification crystallized. Based on this comparative evidence it is increasingly becoming evident that the Harappan cities, such as Harappa, Mohenjo-daro, Rakhigarhi, Ganweriwala, and Lothal may have been relatively independent city-states with direct political control only over the city or at best over nearby settlements around the city, instead of being part of a larger, centrally organized, civilization-wide Harappan state.

The nature and composition of individual groups controlling and directing the affairs of the city is difficult to know: the preeminence of a merchant class as movers and shakers is possible, so is the possibility of heterarchical rule by a few hierarchically organized groups. A caste-type social system has also been evoked to form the political base of the Harappan city-states. All these speculations have one thing in common: their negation of a centrally organized Harappan state.

The above analysis does not provide us with clear answers and a number of questions can be raised.These questions are more-or-less of the same type as those raised against the centralized territorial state. In this situation, the debate about the political organization of the Harappan society

essentially boil down to the question whether the Harappan was a state-level urban civilization or, notwithstanding a number of large cities, a stateless agricultural society. The foregoing chapter and the present one come to the side of state-level society; the next chapter examines the possibility of the Harappan society as a stateless affair but with cities.

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Chapter I.5.

A Stateless Society?

[redacted]

The formation of state is considered a necessary component of civilization, and a strong case for the Harappan Civilization has

indeed been made for it in the preceding two chapters. We also noted that the Harappan civilization was peculiar in this respect. It is not that a centralized state or a commonwealth of city-states did not exist, it is the trappings of a state – developed bureaucracy, war machinery, palaces of the kings, state-sponsored temples, tombs of important personalities, etc – that did not seem to exist. If there was an Indus state, it seems to be something of a faceless sociopolitical system, which differed from those of Mesoportamia and Egypt. Individuals, even prominent ones, do not readily emerge from the archaeological record, as they do in Mesopotamia and Dynastic Egypt, for example. There are no clear signs of kingship in the form of sculpture or palaces. There is no evidence for a state bureaucracy or the other trappings of "stateness." Nor is there evidence for a state religion in the form of large temples or other monumental public works. At the same time, there is no sign of coercive activities of the state.

The absence or near-absence of these indicators of statehood have led some leading archaeologists to view the Harappan Civilization as a sophisticated but probably stateless society. Fairservis (1), following Malik (2), for example, has suggested that the Harappan political system was one of kin-based units, more closely resembling the organizations of Polynesia or the Northwest coast of North America than a state of antiquity. He notes that without a strong military, this “more village-like than city-like” civilization was unified by common traditions rather than a strong government - central, regional, or city-based. Service (3) carry this point to its logical, if extreme, conclusion: the Indus Civilization may have been a chiefdom rather than a state-level society.

In advancing the non-state theory of Harappan political organization, Malik, Service, and Fairservis deny the Harappan Civilization the role of a highly complex society. Such a position has, however, not been widely accepted. There is almost a consensus among scholars that the Harappan society was by and large a complex society and exhibited all the signs of social stratification but the question of state is another matter.

More recently, Thompson (4), agreeing with Malik, Service and Fairservis, has discussed this issue in some detail, proposing that an urban society can exist for a long time and over a large geographic area without a state. He argues that Harappan Civilization was such an example. Here, “a whole group of interacting *urban* societies, almost certainly lacking the state, existed for approximately seven hundred years; that “.... merchants specializing in long-distance trade organized the production of the largest-scale public good; and that an unusually early emergence of long-distance trade probably produced these societies” (4). His analysis suggests strongly that the extreme frequency of state organization in civilized societies has been, in a straightforward sense, “an accidental feature of our world’s development and not an essential feature of civilization” (4).This is certainly not a radical thought but very clearly stated.

Jim Shaffer (9) adds his voice to this issue: “The data do indicate that if pronounced social stratification was present in Mature Harappan Culture, it is reflected in a different, as yet undetected, set of archaeological traits than is the case in Mesopotamia”. According to Shaffer, it is quite possible that the road to an urban literate culture in the Indus Valley represents a unique achievement in urbanization. “It could be that in the Indus Valley, a technologically advanced, urban, literate culture was achieved without the usually associated social organization based on hereditary elites, centralized political government (states, empires) and warfare” (9).

Some archaeologists, such as Dhavalikar (5), Lal (6), and Gupta (7), have proposed the political structure of the Harappan Civilization based on some form of caste system, the modified form of which later prevailed in Pakistan as well as in India in historic times. These scholars connect the multi-tier nature of most of the Harappan cities (i.e. Citadel, lower town, middle town, suburb, etc) with the existence of separate living quarters for different social groups. These social groups may have not differed from each other in their material standing but they differed through their profession and ritual purity. It is these social and professional groups which effectively were the government and the statet. Ratnagar (8) also subscribes to the existence of such a social order but does not consider it an alternative to the state.

Taken together, these opinions make a robust case for a *sateless society* although, beyond a general disaffection with “an authoritarian, hierarchical, social and political system”, no in-depth study has yet come to fore and no coherent alternative, including the Harappan as being a stateless society, been yet offered.The models of a centrally organized state or of a city-state, discussed in the preceding two chapters, do not answer all the questions about the political organization of the Harappan society, nor does the model of a stateless complex society, to be discussed here. It is nevertheless instructive that we examine these alternative thoughts.

What is a Stateless Society: There is considerable commonsense agreement among those interested in what is meant by a stateless society. All of the definitions are negative concepts because what we mean by a stateless society ultimately depends upon what are held to be the characteristics of the state. Thus, a stateless society is one that has no specialized political roles, let alone institutionalized political structures composed of a plurality of roles. By specialized we mean formal, named, and recognized roles that are played by specialists, not by any or every full member of the society. By political we mean that aspect of social activity which is primarily concerned with power - with getting certain things done, with making decisions and getting them carried out, or preventing things from being done, by and on behalf of some collectivity of persons. In these societies, the control of violence both in its relatively internal and external aspects looms large, but we would not subscribe to a definition of the political that relates it directly to the use of physical force, for although this possibility is present somewhere in any system of political action, it is essentially an ultimate sanction, usually very indirect and significantly overlaid with other important and conventional mechanisms.

The negative starting point of the usual definitional approach to stateless societies is no coincidence. It is due to the fact that these societies first attracted the theoretical interest of scholars who were themselves socialized in states, where the concept of the state had been a consuming object of cultural interest for at least four centuries, from the time of Machiavelli, if not for nearly two and a half millenniums, from the time of Aristotle and Plato. The stateless society has understandably never been such an object of intellectual interest for anyone socialized in one. We are therefore justified in

endeavoring to ignore the whole body of philosophical speculation on the state while concentrating on theoretical implications of the empirical facts of stateless societies insofar as they are known and to seek a more positive definition from this point of view.

Evidently, hunter-gatherers communities were stateless societies, if they can be termed as ‘societies’. So were the tribal groups. The chiefdoms, especially the so-called ‘complex chiefdoms’ were, however, a different matter. Conceptually, they were stateless but still ‘civilized’ enough as to be called ‘societies’. Thus, in the discussions on the evolution of state, a stateless society quickly boils down to a chiefdom, especially the ‘complex’ one (4).

As explained in Chapter I.1., social evolutionary theory depicted the rise of states as a series of "punctuated" (that is, extremely rapid) and holistic changes from one stage (or type of society) to another. In each stage, all social institutions - politics, economy, social organization, belief system - were linked so that change had to occur in all institutions at the same time, at the same pace, and in the same direction. The prehistoric representations of these social types were modeled after "our contemporary ancestors," societies studied by ethnographers. Although this progression of ethnographic societies, is no more than a metaphysical construction, the concept of a chiefdom, especially a ‘complex chiefdom‘ as an immediate precursor of state is thought to be a useful concept in the study of early societies. In the empirical sense, if an urban society is not a state, then it must be a ‘complex chiefdom”. Consequently, the Harappan Civilization has been variously described as a complex chiefdom, as an alternative to a state-level society. The application of this straitjacket description on the Harappan Civilization, or any other early society, is, however, unwarranted: the real situation is generally much more complex.

A Society with Cities but Without State: Perhaps the first scholar who questioned Piggott's interpretations of the Harappan political structure was Fairservis (1). He opined that the settlement pattern of the civilization indicated little dependence on urban centers for economic purposes (see the last chapter for details). That factor, coupled with little or no indication of pervasive warfare, suggested to him that Mohenjo-daro was almost purely a ceremonial center, rather than a center of political power. Fairservis (10) also cited the abandonment of the Harappan cities in the face of a "precarious economic situation" brought about by putative denudation of the forest cover of the Indus plain”. This he viewed as indicative of the ineffectiveness of the administration of the Harappan cities "in handling the problems."

“It may have been preferable to move away rather than to remain, which indicates that the rigid control by a theocratic or secular government, suggested by some earlier authorities, was in fact largely nonexistent”. Instead of expanding their cultivation to the richest alluvial lands just beyond the active flood plain they occupied, the population drifted out of the region, “conforming essentially to the same pattern that had been followed by their Iranian forebears....It was a civilization with cities but was not, at least politically, a state” (11). And, later in the same paper:
“We cannot envision the civilization as representing a vast empire with twin administrative capitals, a fully developed riverine commerce, and a flourishing sea and overland international trade, as some authorities suggest. The centralization of administrative control obviously required to build large structures, and to cultivate acreage, harvest, and store is not beyond the powers of an elaborated village administration .... there is no good evidence for priest-kings, slaves, courts of officials, and standing armies. [When the need arose,] no massive effort requiring the concentrated energies of thousands of persons seems to have been made, unlike ... [the] great irrigation canals .... constructed

[at Sumer] .....” (11).

Other anthropologists soon joined Fairservis in questioning the traditional synthesis of the Harappan political order. The assessment by Malik carried Fairservis' downgrading of Harappan political complexity to its anthropologically logical conclusion: “.... the Indus civilization, far from being an empire with twin capitals or even a primitive state, was a chiefdom, a simpler form of sociopolitical organization” (2). Malik later reiterated his views: “... material uniformity and planning do not imply any unitary common sociopolitical authority .... lack of any clear political authority is also indicated by the lack of any outstanding monuments ...or supreme gods [that] would suggest a totalitarian government” (12).

While noting that Malik's interpretation rested primarily on negative evidence for a coercive system and remained inconclusive, Service nevertheless supported Malik's contention by pointing out that “the overall cultural coherence over a long time span, with no (or little) evidence of warfare or other disturbances .... raised the possibility that this was a chiefdom” (13).

Without citing the demurrers from Fairservis, Malik, and Service, Shaffer (9) took archaeologists to task for “the uncritical acceptance of [the Piggott and Wheeler] interpretations [which] has resulted in preconceived notions about the nature of the archaeological data ....”. Shaffer questioned “whether the Mature Harappan traits, such as the homogenous material culture, developed craft specialities, specialized public architecture ... , literacy, extensive external trade, and a grid-patterned urban center reflect [as they do in early Mesopotamia] a highly stratified society with centralized authority”.

Shaffer (9) lists the following points to bolster his critique of the traditional interpretations: 1) The limited nature of the archaeological evidence;
2) A greater variety artifacts between, and within geographic areas and within artifact classes than earlier assumed;
3) A questioning of identification as state granaries of structures at Mohenjo-daro and Harappa; 4) The cultural homogeneity that does exist can be accounted for by the mechanism of internal trade rather than strong central government control;
5) The "gridiron layout" cited by Wheeler as an example of urban planning "existed more in Wheeler's mind than in Mohenjo-daro's actual design";
6) The tendency of objects, whether of metal or other materials, to be distributed throughout an occupation level of an Harappan component rather than cluster in the residences of an elite or in buildings of apparent special function; and 7) Despite a hierarchy of settlement size, evidence from Allahdino, one of the two village-size Harappan sites thus far excavated, reveals a full range of typical Harappan artifacts, including semiprecious stones and precious metals, as well as examples of Harappan script on seals, sealings, and on pot-sherds; all these imply an equality of access to the wealth or at least the symbols of wealth among the large urban centers and the small villages. Shaffer's position, then, was aligned with the views of Malik, Fairservis, Service, and some others in questioning the interpretation of a strong central Harappan government.

It was a civilization with cities but was not, at least politically, a state”

Walter A. Fairservis,Jr. 1967

Other scholars also began echoing cautionary notes about Piggott's views of Harappan political

organization. For example, Allchins, although admitting the Harappan Civilization organized as a state, stated: “[Such] glib [interpretation] conceals the cold archaeological truth, that .... there is no positive evidence that the cities [Mohenjo-daro and Harappa] were capitals, either of separate states or of a unified empire” (14). Those caveats were tempered, however, with concessions to the Piggott approach and ignored Fairservis's revisionism. “[While such a Piggotttype conclusion] remains hypothetical .... generations of archaeologists have felt that some such interpretation better fits the evidence than any other” (14). Like Jim Shaffer and others, Possehl explicitly argued, rather persuasively, that while we may have "state-level organization" during the urban phase of the Indus Civilization, we do not find many of the features we would normally associate with a state (15).

Possehl suggests that the state is "a highly successful form of sociocultural organization: “... Peoples organized as states are often able to expand through conquest; this political form can be seen as aggressive, even predatory" and explains that the prevalence of states in the ethnographic record may result from "other forms of sociocultural complexity simply fall[ing] prey to state forms of organization or their own internal failings in organization" (15). Some non-state societies appear to have effectively resisted being absorbed by the state, but in general large-scale stateless forms of organization, "sociocultural complexity without the state," seems to have survived only in areas where specific geographical or ecological factors have inhibited the growth of state mechanisms in pre-modern times. Thus Islamic societies in North Africa and elsewhere (18), and Tibetan societies remained stateless for long periods because the physical obstacles facing those who might wish to impose state organization on them were such that until the mid-20th century such control could never be maintained (or was simply not worth maintaining) for more than short periods of time. This underlies, for example, the partial and intermittent Chinese attempts to exert sovereignty over the Tibetan region during the 17th to 19th centuries.

If Possehl is correct that the existence of sociocultural complexity without a state is, as it were, the natural condition of things except where (as usually) it falls prey to the aggressive expansion of the state model, then we hardly need the Indus Valley to provide a model for the development of such a political form in the other regions. We might simply regard this as the normal state of affairs where large-scale cooperation develops in the absence of expansionist military states.

Not specifically subscribing to the Harappan cities as staleless societies, Kenoyer made the suggestion: that people who rose to great prominence in a city’s commerce, along with priests, effectively *were* the government. They are understood to be suppliers of diverse public goods, *not* as the state but handling their society’s affairs through the control of trade and religion, rather than military might. Given the obviously commercial character of Harappan cities, and given a well established tradition of control by the merchants, artisan guilds, and elders of important or ‘respected’ families, the idea of a top elite composed of trades and religious leaders is certainly plausible in the Harappan Civilization. However, it is not at all clear what sorts of trade (or traderelated) goods and services they might have manipulated so handily. The current working of the merchant elite in Pakistani and Afghan cities is no guide because of the changed mechanism of trade and transportation.

Kenoyer describes the Indus Civilization (the Mature phase of the Indus Civilization) as "the earliest state level sociopolitical organization in South Asia" (16). His wording here is careful and deliberate: "state level," not "state". Kenoyer, however, does not explicitly negates a Harappan state and sometimes implicitly appears to admit it. For example, he writes: “Based on the current state of

research I feel that the Indus state was composed of several competing classes of elites who maintained different levels of control over the vast regions of the Indus and Ghaggar-Hakra Valley. Instead of one social group with absolute control, the rulers or dominant members in the various cities would have included merchants, ritual specialists and individuals who controlled resources such as land, livestock and raw materials. These groups may have had different means of control, but they shared a common ideology and economic system as represented by seals, ornaments, ceramics and other artifacts ... The largest cities may have been relatively independent, possibly even small city states, with direct political control only over local settlements and land . . . " (16).

These opinions, taken together, now seem to be jelling into a shape in which an economy based on a combination of agriculture with wheat and barley as major crops, and pastoralism using sheep, goats and cattle, along with an apparently highly decentralized political system held together by trade and sharing a common ideology and culture over a very large area, are central features of the Indus cultural adaptation as it existed until the collapse of the civilization. If the original excavators of Mohenjodaro and Harappa thought of the Indus Civilization as a centralized state this was in part because of their excessive reliance on data which derived from Egypt during the 1920s and 1930s. The Western biases towards seeing the centralized hierarchical polity as the only form of large-scale political organization probably played a part in the development of a false picture of the Indus polity.The idea of a complex and large scale society without what we would typically regard as state organization - organized control, a bureaucracy of some kind, hierarchical structure encompassing a demarcated territory, some form of police or military organization to enforce obedience - arose in modern times from British social anthropology. Archaeologists in recent years have been increasingly interested in models derived from social and cultural anthropology.

It is perhaps worth pointing out to those unacquainted with the literature on state formation that there is an extensive body of anthropological research demonstrating the existence of effective modes of large-scale organization and coordination in the absence of state structures. These structures may be based on clan and lineage structures, with patterns of segmentary opposition, feuding, etc., as found among the pastoral populations of Northern and Eastern Tibet in modern times, but we also find, for example through parts of West Africa, a combination of sedentary populations with mostly small-scale authority structures linked together through collective agreements to protect trade and markets into large-scale trading networks (17).

The idea of a stateless Harappan society has recently been offered anew but from a different angle. Thomas J. Thompson (4) has proposed that an urban society *can* exist for a long time and over a large geographic area without a central authority or a state. He claims that Harappan Civilization was such an example. Here, "a group of interacting *urban* societies, almost certainly lacking the state, existed for approximately seven hundred years in the Indus Valley; that merchants specializing in long-distance trade organized the production of the largest-scale 'public goods'; and that an unusually early emergence of longdistance trade probably produced these societies." His analysis suggests strongly that the extreme frequency of state organization in civilized societies has been, in a straightforward sense, "an accidental feature of our world's development and not an essential feature of civilization". This is certainly a radical thought.

A similar criticism comes from Charles Maisels (19). One of his underlying arguments is that imposed systems of 'legitimate' violence, which is thought to be essential to the long-term functioning of all reasonably complex societies, was absent from the Harappan Civilization. We shall

here review these arguments; those of Maisels in some details. This is, of course, not to diminish the important contributions of others, referred to above.

THOMPSON'S ARGUMENTS

Thompson notes that the Harappan civilization was the product of farmers and herders who spread out from the western margins of the Indus plains in the late 3000s BC, displacing very few, if any, of the earlier inhabitants. The people of this civilization used writing, at least for limited purposes, made extraordinarily widespread use of metal tools, and inhabited a number of commercial cities that achieved considerable scale and remarkable levels of urban amenity. The similar layouts and similar public buildings of Harappan cities strongly suggest that no one of them served as a capital. According to Thompson, and contrary to what has been believed for decades, neither their similar, highly regular layouts nor their many uniformities in construction practices need indicate that a great planning entity was at work: gridlike layouts were the norm even for small settlements of the pre-urban era, and by far the most impressive uniformity - Harappa's common system of dimensions for bricks - has been shown to have had its origins in a pre-urban diffusion of technically superior practice. In light of these considerations, Thompson concludes that it seems unlikely that the Harappan Civilization had any overarching political unity, although some widely patronized ritual centers may have existed. The unity that we observe is purely of cultural type which is largely a product of diffusion, people's migration, and settlement expansion due to population increase.

Thompson starts with several assumptions which include the followings: (1) neighborhoods and artisan's sections, which had distinct boundaries and corporate identities, had little difficulty in creating and maintaining local walls and streets; (2) marketplace and community actors managed public order; and (3) law was decentralized thing. Regarding the first assumption, almost half of Karachi, to give a recent example of a stateless enterprise, was built in 1947-50 without the intervention and power of state, several independent but mutually connected settlements arose in rapid succession. These settlements had city plans with more or less straight streets and avenues, sewage system of a primitive nature, and demarcation and respect for private property although no piece of land was acquired through purchase or legal transfer. The settlement boundaries approximately corresponded on linguistic or ethnic grounds (Dilli Colony, Punjab Colony, Ajmer Nagri, etc), real or perceived. These neighborhoods maintained their respective boundaries without the use of force or a threat of the use of force. At the same time, the various sections of the society provided the basic amenities to their members without the existence of state. Even today, the affairs of most of the FATA towns and cities in the Pashtun country are handled by the community elders, shopkeepers, transporters, and religious leaders. All this happens without the existence of an overarching state.

As regards to the second point, the management of public order by community elders and marketplace is a common occurrence in Pakistan's cities and town as well as those in Afghanistan and probably India, even today. Again, the example of the FATA area is of relevance. Regarding the third assumption, commercial disputes are routinely settled by guilds, merchant's associations, and the members of 'respectable families' all over Pakistan without the help of the state, as they have been in many times and places in the past. Such arrangements are often peculiarly practical in urban areas owing to the normally rich social networks in such places. A case in point is Karachi and Lahore where densely populated areas and the presence of a strong business class almost guarantees the smooth running of commercial and social affairs compared with smaller towns and villages which are often the hotbeds of property disputes and blood feuds. Even in the modern days of state power,

we see pockets of human population who live under stateless conditions but still not experiencing anarchy.

Thompson draws our attention to the Harappan remains, which, subjected to numerous excavations since the 1920s, are unusual in the extreme in that they offer up not a single obvious palace or imposing temple, but only simple public halls; not one massive tomb; and not even a large statuary. This set of absences, which seems to indicate a complete lack of great public cults (religious or political), has played an important role in leading him to view the Harappans as sophisticated but probably stateless peoples, in consonance with the views of Malik (2,12), Fairservis (1,10,11), Shaffer (9,20), Possehl (15) and others.

Remarkable as well and equally worth taking into account for its institutional implications is the fact that in diverse ways the Harappan remains indicate that neither war nor threat of war played an important part in intercity relations. First, the Harappans do not appear to have constructed any memorials to military campaigns; nowhere is any battle damage reflected in physical structures; and human remains reveal no evidence of violent death. Second, and of greater significance, the Harappans produced extraordinarily few kinds of specialized fighting weapons (21) and no defensive armor, although they possessed sophisticated metalworking techniques even in the early phase of their flourishing (22). One of the major combat weapons they employed was the stone mace, a sort of weapon that everywhere in history quickly became militarily obsolete. Third, the walls that surrounded each sizable section of a city on the Harappan floodplains were unaccompanied by moats, and in each case they were singular - that is, they established no system of concentric barriers; charging fees for access seems to have been the sole consideration in the construction of their gates. “Because we can scarcely imagine a centuries-long interstate system seldom disturbed by serious warfare or even by its prospect, we have solid grounds for concluding that the Harappans did not know the state” (4).

To begin with, Thompson notes a paradox: There's a good deal of evidence for cultural continuity and commonality in different parts of the Harappan cultural sphere; and as we noted, this seems to have developed pretty quickly. At the same time, there are also patterned regional differences, particularly between, for example, Baluchistan, the Indus Valley itself, and Gujarat. This is not the empire of uniformity that archaeologists like Sir Mortimer Wheeler spoke of. Nevertheless, neither the similar, highly regular layouts of the Indus cities nor their many uniformities in construction practices need indicate that a great planning entity was at work: grid-like layouts were the norm even for small settlements of the preurban era, and by far the most impressive uniformity - Harappa’s common system of dimensions for bricks - has been shown to have had its origins in the pre-urban era. In light of these considerations, Thompson concludes that it seems unlikely that the Harappan Civilization had any overarching political unity, although some widely patronized ritual centers, like Mohenjo-daro, may have existed. The unity that we observe is purely of cultural type which is largely a product of diffusion, people’s migration, and settlement expansion due to population increase in the Early Indus period. In his opinion, merchants specializing in long-distance trade were the agents of cultural change. They were also the organizers of the production of the largest-scale public good.

Production of Public Goods: The study of Thomas Thompson (4) is particularly significant for his examination of the production of ‘public good’ (for example, the city’s infrastructure and its maintenance) in a ‘stateless’ society and his discussion of the question of manifest cultural homogeneity of the Harappan Civilization. We review his ideas in the followings.

The possibility of producing public goods by non-state actors is by far the most potent argument of Thompson's hypothesis. The Indus cities are known for their extensive 'public goods', that is, city walls, town planning, street layout, provision of fresh water, drainage system, public baths, etc. The production of 'public goods' has routinely been associated with some sort of state mechanism and it has been assumed that the public welfare cannot be assured without state. Thus, opinions have gravitated to the belief that the Harappan Civilization must be a state, even a city-state. However, as Thompson argues, if we allow the contemporary examples for elucidating the past, we may not be terribly amiss if we evoke the parallelism from some sectors of larger cities where the present day market elite is certainly a producer of public goods independent of the state (regular cleaning of streets, disposal of neighborhood garbage, provision of fresh water in certain cases, disposal of residential sewage, continual repairs of the sewage drains and street pavement, etc. as well as, in some cases, the provision of electricity during city's power breakdowns). There is no reason to insist that the Harappan elite could not be the producer of public goods of their time in the same fashion.

Second point of relevance is that as the present-day city elite invariably makes unilateral investments in substantial public goods, so could have the Harappan elite. This investment, by its very nature, must be local. In fact, it could not be otherwise since no element of the Harappan elite had the self-interest and strength in investing in public goods production in other cities or even other sectors of the same city. They, obviously had limited strength to mobilize men and material for undertaking the public projects, even if they served their sense of self-interest. These considerations lead us to an autonomous management of cities, even different sectors of the town, visible to us as two, three or more walled sections of Mohenjo-daro, Harappa, Chanhu-daro, Kalibangan, and other Harappan cities (4).

It is likely that each city's commercial elite made unilateral investments in large-scale public goods, if necessary simply negotiating for all essential cooperation from and making all needed side-payments to neighborhoods and artisans' sections. This arrangement may seem implausible at first, but the existence in any city of an elite group of commercial actors prepared to be so "exploited" is entirely reasonable so long as the character and the histories of the seal-using trade groups were what economic theory and archaeological evidence suggest they were (23).

The emergence in Harappa of large longdistance merchant clans investing in extractive operations within their own regions and beyond (soon joined everywhere by a plainswide participant in long-distance trade) is a development fully compatible with what is known of Harappan economic evolution and one that appears to make all of the Harappans' large-scale public-goods production explicable - including even the first and in some ways the most impressive large-scale public good, the reconstruction of many settlements' walls and streets as cities first emerged. As commercial towns and cities grow, their inhabitants proceed to transform outlying areas into suppliers of raw materials. Thus, it seems reasonable to hold that Harappa's archaeological uniqueness has to do with the civilization's having generated purely *voluntary government* - and a far safer bet than the view that remains have been unusually resistant to interpretation or that they stand for states of an unusually pacific, modest disposition (4).

Thompson (4) assumes the following: (a) neighborhoods and artisans sections, which had distinct boundaries and corporate identities had little difficulty in creating and maintaining local walls and streets; (b) marketplace and community actors managed public order; and (c) law was a decentralized thing. Commercial disputes might have been settled by guilds, as they normally have been in many

times and places (24) and, later, in pre-colonial India and Pakistan. All other sorts of disputes might have been handled as arbitrated or mediated torts, as has been common in the present-day rural Pakistan. Pre-industrial city guilds, neighborhoods, and clans all had a stake in the peaceful settlement of members' disputes. Davies holds that such arrangements have often been peculiarly practical in urban areas owing to the normally rich social networks in such places (25).

If we do allow the contemporary examples for elucidating the past, we may not be terribly amiss if we site the parallelism from some sectors of larger cities where the present day market elite is certainly a producer of public goods independent of the state, (regular cleaning of streets, disposal of neighborhood garbage, provision of fresh water in certain cases, disposal of residential sewage, continual repairs of the sewage drains and street pavement, etc as well as, in some cases, the provision of electricity during city's power breakdowns). There is no reason to insist that the Harappan elite could not be the producer of public goods of their time in the same fashion. Second point of relevance is that as the presentday city elite invariably makes unilateral investments in substantial public goods, so could have the Harappan elite. In fact, it could not be otherwise since no element of the Harappan elite had the self-interest and strength in investing in public goods production in other cities or even other sectors of the same city. They, obviously had limited strength to mobilize men and material for undertaking the public projects, even if served their sense of self-interest.

Cultural Hiomogeneity: What about the apparent homogeneity and standardization in material culture over the entire Indus realm? How did it originate and how was it maintained in the absence of a territorial state or a commonwealth of city-states? This is a thorny issue. A lot has been written on this topic, ranging from the acting of a centralized state to the doing of intercity trade. The problem is often considered in isolation and it is generally overlooked that the forces of homogenization were not the outcome of the Harappan development. This uniformity in artifacts, architectural style, town layouts, etc. were manifest over large areas even before the Harappan Civilization started to be in sight. These forces of homogeneity and cultural interactions were so strong that they were getting obvious in the remarkable integration of cultures that preceded the onset of Harappan Civilization.

We are not concerned here as to the nature of these forces; for us important point to learn is that all this was happening without the existence of state. Whatever these forces were, the rapid expansion of internal and regional trade was bound to accelerate the process. Add to it the process of the steady expansion of the settlement area from the core Harappan nodes and the important role of the nomadic population which continued to cross pollinate the regional cultures up to very recent time. Of course, the trade or extractive expeditions organized by the city elites and the establishment of trade or transportation outposts in the remotest corners of the Civilization could not but homogenize the material culture over a remarkably large area. For these processes to happen, no state was needed.

First and foremost, it has been claimed that the uniformity of Harappan objects has been overemphasized, and the traditional emphasis upon the very distinctive Harappan black-on-red pottery has prevented the definition of regional ceramic variations which manifest themselves among the non-decorative or non-black-on-red ceramics. Several instances of cultural variation have recently come to light; the cases of cultural idfferentiation in Kutch and Saurashtra, Kuli region, and Zhob and Quetta valleys can be quoted. Judging from their material culture, the people of Kutch and Saurashtra do seem to be different from those of the core areas of the Indus Civilization: this comes through as not just different kinds of pots and other artifacts, but in terms of subsistence, adaptation,

and ways of life. Similarly, the Kulli people of South Baluchistan and those of Zhob and Quetta/Pishin Valley of northern Baluchistan stand out in contrast to the Harappans of the riverine plains. They seem not only to be somewhat different from the core area but also from each other. We also see some variations in material culture in the Indo-Gangetic Divide but these cultural remains, along with those of Kutch and Saurashtra, are of Late Harappan or even post-Harappan period rather than of the Mature Harappan period.

Still, in spite of all these possibilities, the fact remains that almost all the relevant examples of diversity available to us are from the peripheries rather than from the core of the civilization. Looked from this venue, some degree of regional variation in ceramics does exist but these variations stem from being outside the time frame of the Harappan Civilization. Furthermore, all these differences are concentrated on the frontier regions into which the Harappan culture was expanding.

In view of these studies, there is no escape from facing the reality of a manifest cultural uniformity over a large area and over a long period of time and this has to be explained in the absence of a controlling authority. No doubt, some roundabout and nebulous explanations have been offered but these are not enough. For example, in concluding her detailed examination of private houses at Mohenjo-daro', Anna Sarcina observes that:

“.... the continuity and the uniformity of buildings make evident this structural logic [northsouth orientation, courtyards, few windows, thick walls, many ablution platforms; all well adapted to the continental climate]. It is because of this uniformity that a government was often suggested that had been able to impose its direction on a people without imagination. It is obvious that a government must have existed but it is more prudent to talk of coordination than imposition” (26).

The most logical explanation is perhaps the outcome of some ethnographic studies undertaken in India and Pakistan. These studies have shown that a long term cultural stability over a large area could easily stem from the organization of certain craft production in this region.The knowledge of specific craft technologies is passed on from one generation to the next through kin networks and thus prone only to some long term variations. In these instances, no central authority is needed to keep the tradition going for a long time and over a large area.

The role of the merchant elite may be there but at least some crafts, such as pottery and ornaments, could have been standardized through mechanisms other than the dictates of the elite. For example, if a son or a daughter generally learns to make pottery from his or her mother, father, aunt or any other member of the family, painting styles and techniques are gradually standardized over several generations. These standardized technologies and decorative styles spread to new settlements as artisan families spread out to new markets or an apprentice leave the master’s workshop to open up his or her own shop in a new town. Indeed, such is the case in Pakistan even today.

The control of raw material by the merchant elite must not be minimized also. A current example for achieving standardization and economic control through the control of raw material is the carpet making industry in Pakistan. The merchant provides the artisans with the required raw material, i.e. the spun yarns, and owns the produced goods for distribution. The artisan, the user of the raw material, is thus dependent on the merchant; so does the dyer and the yarn spinner. Thus, not only an economic control is achieved but also the standardization is maintained. A similar example is the production of Banarsi fabrics in Karachi where standard color combinations and weaving motifs have been maintained for centuries along with the economic dependence of the artisans on the

merchant elite.

MAISELS' ARGUMENT

According to Maisels (19), state resides in the control over people and territory, exercised from a center through specialized apparatuses of power, such as:
1. Military,
2. Administrative (mostly tax-raising),
3. Legal, and
4. ideological.
A fifth element is the center itself, which Maisels call the 'ruling engine' (palace, elite establishments, etc.). Maisels reviews the evidence by way of countering the explicit arguments put forward by proponents of a Harappan state, and covers the above mentioned fiver apparatuses as well as the matter of a ruling engine. His argument is reproduced in the followings.

Military: There is no Harappan evidence for armies, either in terms of imagery or equipment, in complete contrast to the contemporary Near East. There, for instance, Eannatum's Stela of the Vultures' *(ca.* 2450 BC) shows a phalanx formation of locked shields and spears at the charge, while Naram Sin's Stela (twenty-third century BC) graphically shows conquest and death, as, in most graphic fashion, does Horus Narmer's famous palette of some eight centuries earlier. Mesopotamian seals also show many agonistic scenes of struggle and conquest, often centered on a kind of Gilgamesh hero figure. Quite apart from the imagery, Mesopotamia provides us with many explicit texts concerning military matters.

Indus script (which cannot be read and may not even be a conventional script but rather a series of icons) appears on seals. Those seals never show combat scenes but only naturalistic representations of animals, plants, rituals and cultic equipment. The closest we come to a combat scene is an Indus script sign, depicting a human-like figure with a long stick.

In the Bronze Age Eurasia, bronze itself was a scarce, expensive and politically important commodity controlled by the elite. Weapons were expensive for two reasons: materials were costly as also was the highly skilled labor of artificers. Weapons were therefore issued by the palace when necessary, and then taken back into the armory. Those damaged would be remelted and recycled. The same process held for metal farming equipment in Mesopotamia, where temples and other 'great households' were the controlling agency. None of this obtained in the Greater Indus region where, unique amongst major Bronze Age civilizations, copper/bronze was available to all (19).

City walls are apparent in Mesopotamia from as early as the state formation period in the late fourth millennium, and one of the key indications of emergent class stratification in the Chinese Chalcolithic are the *hangtu* or stamped earth town walls. *Hangtu* also provided a platform on which elite residences and whole compounds were 'raised up' above the earth, into which the houses of their servitors were often dug. But city walls in the Indus context have different purposes. The city walls traced by Meadow and Kenoyer at Harappa are too low or weak or poorly maintained to serve as defensive structures. As Meadow and Kenoyer observe (27):

".... walls serve to exclude unwanted elements, enclose what people want to keep inside, and channel formal movement through a restricted number of openings. Walls can also act to physically separate different social units, and as retaining structures, to stabilize construction" (27).

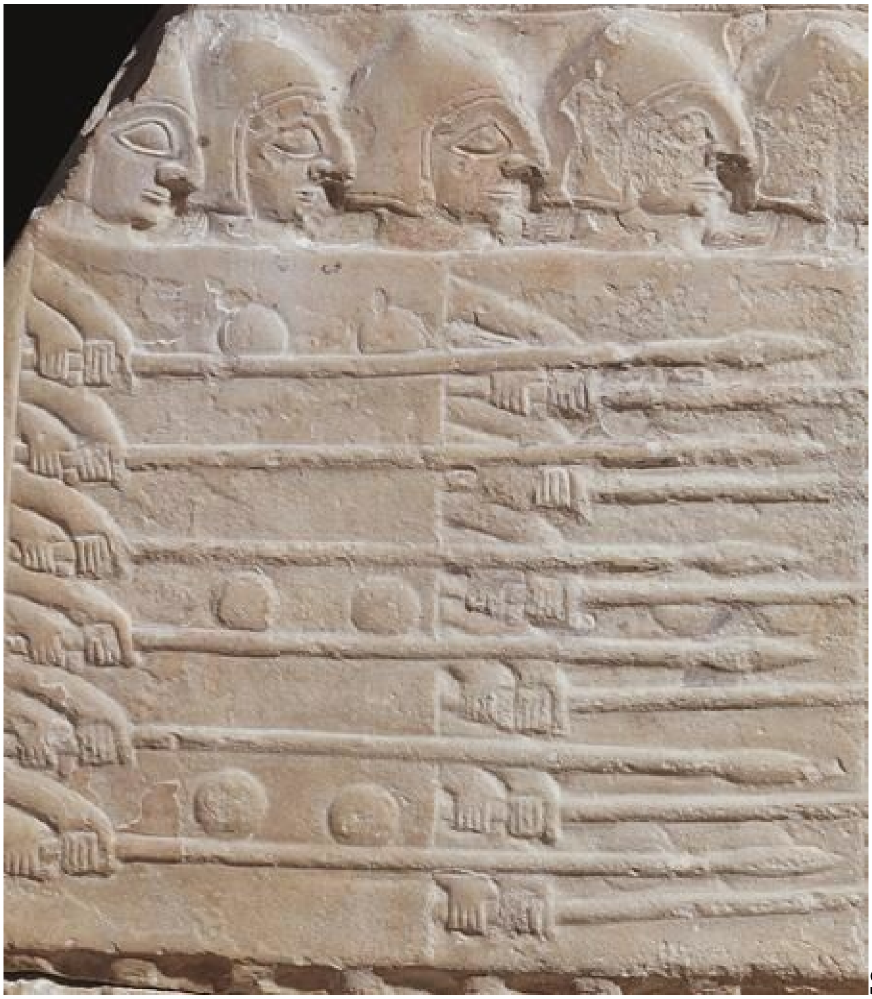
Harappan gateways are not defensive structures. Kesarwani (28), who has made a comparative study of Harappan gateways and defenses, concludes that although “the practice of erecting fortifications and gateways existed even in pre-Harappan times, as is clear from the evidence of Kot Diji and Kalibangan”, it is apparent that the simple design of the citadel and the lower-town gateways had no strategic importance. They were ordinary entrances for the free movement of people and goods.

The so-called 'citadels' at all the Harappan sites appear to be 'ceremonial precincts' for the population of the 'lower town'. They are best referred to, following Flam (29), as *acro-sancturns*, or community ritual precincts. Their scale and openness both to the elements and to the populace make Indus ritual precincts quite unlike temples elsewhere in the Old World, where access to the really potent interior was highly restricted. Acro-sanctums have their origins in Amri-tradition settlements in Sindh Kohistan, where thirteen of the forty known sites possess 'high places' adjoining a 'lower town'.

“The most conspicuous prehistoric settlement type in Sindh Kohistan consists in part of an artificially built, conically-shaped hill which rises to an average height of 25 meters above its surrounding plain. These conically-shaped hills (known as *buthi* in Sindhi) vary in circumference, in Sindhi) vary in circumference, 4) of encircling, terraced stone walls on its slopes, and remnants of inclined stairways or ramps ascend its southern side. Below these conicallyshaped hills lie the remains of numerous stone foundation walls indicative of domestic structures” (29). This is certainly not a construction of military significance.

Administrative, mostly Tax-raising: Across Eurasia the origins of writing and accounting lie in taxraising and the tracking of revenue flows (30). In the Greater Indus area, there was a great deal of economic activity, a clear manifestation of which are the finely made and highly standardized weights. Some of it even involved foreign trade, but nowhere is there evidence of a controlling authority (31). There is no doubt that Mohenjo-daro was an integrative center, and, according to Atre (32), its importance was primarily as a religious, ceremonial, cultural and economic center, while Harappa's eminence was probably due to trade. As Atre (32) suggests, almost all the other excavated Harappan settlements, from village-sized and over, seem to be craft and/or trade loci, lacking any local manifestations of state control or central administration.

“it is apparent that centers like Chanhudaro, Lothal, and Shortugai, were each located at a vantage point to carry out trade transactions. Sutkagen-dor and Sotka-koh on the Makran coast also indicate the commercial acumen of the Harappans in selecting strategic points from



Sumerian phalanx on the Vulture Stele.



Victory Stela of Naram Sin



Palette of Narmer.

which to trade. From these examples it can be easily observed that every Harappan settlement had its own specific function” (32).

Legal Control: Neither in the sense of a monopoly on the legitimate use of force, nor in the civil sense of dispute resolution between right holders is there any evidence of a 'Harappan' legal system or code. Rather, the evidence presented under the military and administrative headings (above) indicates a negotiated, ideologically constrained and consensual understanding of 'law': not a 'legal process' established through the courts of a central authority, but a localized, relatively informal, dispute resolution process (19).

Ideology: With Atre (32) and Miller (33), Maisels argues (34) for strong normative 'controls' on behavior in Harappan Civilization. He states that ideology certainly had a central place in the functioning of Harappan society; what are not present, however, are temples on Egyptian, Mesopotamian or even Chinese lines. They just do not exist here as the houses of a god, as monumentally imposing buildings. Installations are not monuments, still less dominating ones, as are the deliberately intimidatory structures of Albi and the Sacre Coeur in Paris. Further, there is no evidence that they were 'great households' on Mesopotamian or Egyptian lines, supporting themselves as establishments by controlling people and property through extended family structure.

The artifact conventionally assumed to be evidence of a state religion, personified by the existence of a supposed 'priest-king', an incomplete stone sculpture of a seated male wearing a trefoil-patterned garment. Whatever or whomever the bust represents, there is evidence that it is both late and atypical, such that J.-F. Jarrige (35) refers to as having 'some connection with an intrusive iconographical tradition', though probably locally produced. Further, the trefoil is almost absent on Harappan ceramic: only two polychrome pottery sherds from Mohenjo-daro are known which bear red trefoils

with white borders on an apple-green ground. In fact the 'priest-king' fragment on which so much has been predicated belongs to a category of miniature (and apparently ritualistic) statuettes that can be found from Elam through Shahdad (with its echoes of Tell Asmar statuary) to Bactria and the Indus Valley, as Winkelmann's (36) pathbreaking synthesis clearly shows. Wheeler had already indicated that the trefoil pattern possessed extensive western connections.

Lacking either textual or architectural evidence, Kenoyer (37) declares that 'at present, we cannot clearly associate the stone sculptures, seals, or any other set of symbols with a "state religion" as opposed to a less structured cult'. Jansen (38) puts it most succinctly: 'not a single monumental representation in sculptural art of rulers, gods or priests has been discovered'. In sum, there is no evidence whatever for a state church, but much evidence for diffuse, diverse and often domestic ritual practices, unified by a set of shared themes ('cardinal tenets') and beliefs.

Dominant Centers and Ruling Engines: Concerning the eerie absence of 'ruling engines', Kenoyer claims that 'many of the complex and sometimes massive structures at Mohenjo-daro and Harappa could have been elite residences, centralized administrative structures or even temples, but later disturbances obscured their primary function. When later? Maisels asks (19). “During the lifetime of Indus Civilization? In the immediate post-Harappan Period or perhaps during nineteenth-century railway construction?”, he asks. And why should their 'primary function' be so obscure if universal state forms or indicators are indeed present?

Nineteenth-century excavation standards in the Near East left a great deal to be desired, but palaces and temples, seals and texts quickly became apparent. Great caution is urged by Jansen (38) in the light of the assumptions of earlier excavators, who 'searched for "fortifications", "granaries", "temples", residences of "PriestKings", "grid patterns" in the layout of the towns', etc., and [unsurprisingly] they seemed to find what they were looking for. “The more Jansen looks at the physical evidence in the field, the more those established categories dissolve. As we saw above, 'fortifications' on close examination have a habit of turning into flood defenses, platforms and retaining walls, 'citadels' into acrosancta” (19).

In the north of Mohenjo-daro Mackay found a large building 74 meters long and 34 meters wide, with outer walls over 1.5 meters thick and bounded on the South and west by two very important thoroughfares. “A short distance south of it is what appears to be a palace - a large straggling building of excellent masonry, arranged around two spacious courtyards, with servants' quarters (sic), a number of storerooms and, in its earlier days, accommodation for metalworkers as well”. To Mackay it 'seems to form an island in an otherwise undistinguished quarter of the [lower] city', and its alignment is unaltered from the surface down 6,5 meters (the maximum he had reached), suggesting to him that 'this building was occupied for some three to five hundred years' .

Maisels retorts (19) that “even if this turns out to be a 'proper' palace with a king rather than an administrative/trade/artisan center, the case for a 'stateless' Indus Civilization is not affected unless it can be shown that the whole region was *ruled* from Mohenjo-daro or some other center. Otherwise the writ of such a 'ruler' would not have extended very far outside of the city, and in any event he may have had no more real power than the Doge of Venice. This putative palace is located in an 'undistinguished quarter of the city' without the usual accompaniment of other elite residences, compounds, ceremonial areas, temples, defenses, etc. From its workaday location and its mundane interior, Maisels sees this large building as having an economic function, artisanal and/or

commercial, analogous to the large, imposing structures housing 'wool' or 'piece' halls in early modern England (19).

Another argument of Maisels is the regional differences in city planning of Harappan settlements. Bisht and Asthana (39), reviewing six (then) recently excavated sites, conclude that:

“Banawali is yet another site of Kalibangan type but whith certain items of town-planning which are similar not to Kalibangan but to the coastal sites like Surkotada. In fact, the dynamism of the Harappa Culture lies in its town-planning; one city was *similar* to the other bur never *identical* since each one was conceived separately by the genius of its own citizens” (31). From this Maisels concludes that there was no Harappan territorial state, but an oecumene (commonwealth) consisting of an economically integrated commerce-and-culture area. Such a view is reinforced by Asthana's contention that Harappan overseas trade, “by and large, appears to have been the joint-venture of merchants, agents, expert sailors, port authorities and others.” Contrary to Ratnagar, she sees Harappan trade, internal as well as external, as essentially non-administered, with commercial agents therefore assuming a pivotal role (31).

THE ALTERNATIVES

If we assume that the Harappan society was composed of a few large cities, surrounded by large or small areas of rural economy, the question then arises: How were the Harappan cities and villages governed, that is, how the given socioeconomic structure of the society reflected in its power structure? Should we think of Harappan urban centers as analogous to Mesopotamian city-states, each with their individual ruler or ruling class? Should we downgrade the Harappan urbanism to a status of an array of preurban chiefdoms or at best to a category of ‘complex chiefdom’? Should we invoke the existence of a powerful ‘ideology’ that kept the Harppans and their cities and towns going? Should we call for an inter-community and intra-community hierarchical system, commonly called the ‘caste system’, for this remarkable stability and longevity of the civilization? Or should we look for a somewhat ill-defined ‘heterarchical‘ set up? This is relatively a new area of research and no firm opinions have yet emerged. Yet, we opt to do some speculation.

The Pursuit of the Wily Chiefdom: The crux of Thompson’s and Maisels’ arguments, summarized above, is that the Harappan society consisted of a number of petty chiefdoms, a few of them at best ‘complex chiefdoms’, surrounded by an array of elementary argo-pastoral and hunter-gathers communities. A considerable number of other archaeologists also tend to downgrade the social complexity and urban character of the Harappan society, reducing it to the status of essentially a pre-urban culture. Walter Fairservis’ famous quote, describing the Harappan society as ‘more village-like than a city-like‘ is an indicative of such a position.

The assessment by Malik carried Fairservis' downgrading of Harappan political complexity to its anthropologically logical conclusion: “.... the Indus civilization, far from being an empire with twin capitals or even a primitive state, was a chiefdom, a simpler form of sociopolitical organization” (2). Malik later reiterated his views: “... material uniformity and planning do not imply any unitary common sociopolitical authority .... lack of any clear political authority is also indicated by the lack of any outstanding monuments ...or supreme gods [that] would suggest a totalitarian government” (12). Service supported Malik's contention by pointing out that “the overall cultural coherence over a long time span, with no (or little) evidence of warfare or other disturbances .... raised the possibility that this was a chiefdom” (13). Gregory Possehl argued for the Harappan society organized as

chiefdom in 1997, although he hedged his bets in 2002.

Looking at a broader picture, a whole line of prominent archaeologists have employed the concept of chiefdom in their analyses of state formation in early civilizations. For example, Colin Renfrew isolated twenty features of chiefdoms and determined that the builders of European megaliths were chiefs; William Sanders and colleagues identified chiefdoms among the prehistoric highland Maya; Winifred Cramer and Jonathan Haas found them in Central America, while Robert Dennan and Carlos Uribe located them everywhere in the Americas; Vernon J. Knight Jr. identified chiefdoms in the Southeast USA; George Milner did so in the Middle West, as did David Doyel in the Southwest. For the Near East, Timothy Earle thought Ubaid and Uruk Mesopotamia were both chiefdoms, and Gil Stein wrote about chiefdoms in the Ubaid, although Patty Jo Watson held that the preceding Halaf was a chiefdom; for Donald Henry also, the Natufian of the northern Levant was a "matrilineal chiefdom" (40).

There is no great secret, of course, why the chiefdom was (and still is) so ubiquitous in the archaeological literature. First, something must precede states that is not even crypto-egalitarian, yet is not exactly state-like, and it requires a name. Second, anthropological archaeologists need a frame for cross-cultural comparison. Primary states arose independently in various parts of the world, and so similar pre-state entities must be identified in order to measure their distances from statehood. And third, the received anthropological wisdom directed archaeologists to flesh out the fragmentary material record of an extinct social organization by means of an appropriate ethnographic analogy. “The ‘archaeological’ procedure was to correlate one or more central features of a favorite ethnographic type with some excavated material, then extrapolate all the rest of the characteristics of the type and so bring the not-directly-observable dimensions of an ancient society into view”. So wrote Norman Yoffee (40).

Archaeologists continued to search the past for chiefdoms into the 1990s (41), although the task was becoming increasingly difficult, as the essential qualities of chiefdoms were themselves changing considerably. The chiefdom began life in the anthropological literature with several defining attributes: social organization consisted of branching kinship structures called linages or clans, wherein all members are ranked pyramidally in terms of distance from real or putative founding ancestors. Chiefdoms are ‘kinship societies’ because status is largely determined through place in the generational hierarchy of groups and of individuals within the groups. In political terms, chiefdoms contain hereditary and usually endogamous leaders (sometimes called a nobility) and centralized direction, especially in matters of ceremony and ritual, but they have no formal machinery of forceful repression.

The chiefly authority in the classical view is correlated with religious authority. Therefore, chiefdoms are "theocracies," with authority distributed as of a religious congregation to a priestchief. Service argued (3) that chiefdoms did not contain any roots of economic differentiation, because production and consumption were governed by "sumptuary rules." The redistribution of goods is a central responsibility and perquisite of chiefly leadership, and it is through the success of such redistributive functions that the nature of leadership finally changes from beneficent chief to wealthy and repressive kings (40).

Henry Wright (44) differentiated between ‘simple chiefdoms’, which are the classically ascriptive sort, with ranks determined according to the distance from common ancestors, and the ‘complex

chiefdom' in which there is a regional hierarchy with a paramount chief ruling over subsidiary chiefs. These paramount chiefs centralized decision-making authority, and they could (and did) mobilize resources to their seats, but they left local communities and sub-chiefs in place. As Wright put it, chiefdoms are externally specialized in order to get the goods from the various regions to the paramount's control, but they are not internally specialized (i.e. with a specialized bureaucracy) to accomplish the task. There was a rank difference between chiefs and commoners, with the chiefs forming a sort of "class" and competing with each other for leadership and control of the ritual institutions that could legitimize their status. However, such attempts at control of goods without a permanent, specialized coercive authority meant that rebellions, breakdowns, destruction of centers, and changes in symbolic orientation were part of what complex chiefdoms were about (40).

States are different from chiefdoms using several criteria, many of which are not easily accessible with archaeological data alone. The shift from kinship to territory as the grounds for determining membership, for example, is beyond the reach of archaeology. The criteria for recognizing early states set out by Clasessen and Skalnik (45) are more approachable using material culture, but still somewhat elusive. They suggest that legitimate power of a separate group of rulers and an ideology that legitimate their power can only be inferred archaeologically by the lack of overt conflict, and the use of ideology for legitimating power is a second level inference. Claessen and Van der Velde (46) further introduce the concept of the trajectory of state formation as a slope rather than a ladder or a staircase, recognizing that "it is impossible to pinpoint the precise moment of the birth of the state".

Gary Feinman and Jill Neitzel (48) observed that since prehistoric change was continuous, it was wholly arbitrary to break the sequence into discrete and distinct blocks. In reviewing books on Andean prehistory, Garth Bawden noted that even late pre-ceramic societies have been called "states" and that one finds "mixtures of characteristics that have been used to identify chiefdoms and states, ranked and stratified societies" (49).

Coming back to the Harappan Civilization again, it will be inadvisable to let the Harappan society to fall victim to a questionable classification by the neo-evolutionist theory. After all has been said and done, the Harappan cities by no means appear non-urban. How can one ignore the superb city planning and the maintenance of of the urban amenities for such a long time? How can one ignore the technological advances so manifest in the Harappan artifacts and how can we not note such a high level of the metallurgical technology? And, how about the long-distance trade which was even more extensive than Sumeria? All this leads us to the existence of a complex society and, as has been said earlier, a society needs a political system as complex as the city itself.

By having a second look, even Fairservis later changed his opinion; he admitted that the "citadels" or elevated areas of the Indus cities may indeed have been the seats of rulers and that in the town planning lies "evidence for strong central control" (10), and posited a class system "based on evidence for specialists of various kinds, for possible centralized authority, for elaborations of houses and material possessions reflective of wealth." Nevertheless, he maintained in an oft-quoted statement that the Harappan Civilization was "*more village-like than city-like* in the

Western sense" (10). Fairservis envisioned "an administration of authority and strength ... to keep matters in hand. But this administration was apparently not sustained in its authority by despotic power; there are no indications of military garrisons, written edicts, in effect, of coercion" (10). Rather, folk tradition, a feeling of interdependence developed in centuries of village life, and religion

provided the positive and negative sanctions that molded individual and group behaviors. These were transmitted down through the generations. Fairservis readily admitted that "these speculations may seem farfetched, but they do offer a reason [for] so much uniformity among Harappan sites ... and are probably nearer the truth than is the assumption that despotism, religious or otherwise, was solely responsible for the civilization's character" (10). This is not a description of state but it is not a description of a 'chiefdom' either. The Harappan society seems to be complex enough as to require an equally complex political system. On this account, it is hard to imagine that it was a stateless society or at best its cities some sort of 'complex chiefdoms'.

Ideology: The role of ideology in the functioning of a society, whether ancient or modern, has been a favorite subject among philosophers, anthropologists and historians alike, starting from the Greek philosophers like Socrates and Plato to Muslim scholars like Ibn-e-Khaldun to historians like Arnold Toynbee.This topic has already been touched upon in as a means of control by the state. Here we focus the role of a common ideology in the absence of state structure.

Ideology in early civilizations is a nebulous concept which has been defined in so many different ways: a body of ideas characteristic of a particular social group or class; ideas which help to legitimate a dominant political power; forms of thought motivated by social interests; socially necessary illusion; the indispensable medium in which individuals live out their relation to a social structure; etc. In recent studies, the term 'ideology' has often been treated as synonymous with concepts such as religion, worldview, belief system, and cosmology.

Order in ancient civilizations implies the creation of a new ideology or set of values, by which we mean the ascribed set of meanings about social, political, and economic relations and events, and specifically about who has power, how it got, and to what extent it is 'legitimate'. The ruling elites, who have access to the supernatural, must present themselves as worthy participants in this process. It more usefully designates a set of beliefs or propositions that are consciously or unconsciously used to promote social cohesion and unity by masking the inequality and exploitation that are present in a particular society.

Robert McAdams (50) has correctly observed that ideology is analytically of no significance if employed in this diffused manner. Ideology seeks to present the self-interested behavior of politically active groups within a society as being altruistic. In this manner, it not only sustains but helps to increase the power and privileges of ruling classes. Such a system is most successful when the aggregate of beliefs and images being conveyed defines and appears to satisfy the collective aspirations, objectives, and ideals of whole societies (51).

Perhaps the greatest theorist of group cohesion was the fourteenth century Arab sociologist Abd-ar-Rahman ibn Khaldun (52). The key concept of Ibn Khaldun was *asabiya*, which can be loosely translated as "group feeling." According to Ibn Khaldun, *asabiya* produces "the ability to defend oneself, to offer opposition, to protect oneself, and to press one's claims" (52). Preponderance of *asabiya* allows a group to dominate the rivals. In context with the times of Ibn Khaldun, the basis of *asabiya* was obviously the Islamic ideology and its worldview, as is today the ideology of 'democracy' that underpins the interests of the West.

The absurdity of the 'ideology of Pakistan' and the mythical illusion of the 'Bharatversa' are two modern examples [of ideology] from the Indian subcontinent

that keep the elites in Pakistan and India in power.

In early civilizations much if not all ideology was religious in nature because political thought tended to be religious (53). The rulers in early civilizations sought to link themselves to an immutable divine order so that the power and mystery of divinity might sanction and reinforce their worldly authority. Religiously grounded ideology was used to justify and promote the activities of the upper classes. In the sphere of law, supposedly innate differences between various social groups were used to justify inflicting less severe penalties on upper-class individuals than on lower-class ones who had committed the same crimes. Wars, from which the upper classes were most likely to profit, might be validated by claiming that they were necessary to safeguard society as a whole or to preserve the cosmic order (53) or to safeguard the 'ideology' of the state. The absurdity of the 'ideology of Pakistan' and the mythical illusion of the 'Bharatversa' are two modern examples from the Indian subcontinent that keep the elites in Pakistan and India in power.

It is apparent from social science literature that until the beginning of industrialization, such socio-religious means were the major controlling factors that enabled continuity of tradition, of craft, technology and occupations, which were passed from father to son and which also maintained social identities that sustained the general structure of society. In all probability this kind of system of ideas of socio-religious and political nature supported the general workings of the Harappan society - as a territorial state, as city states, or as a stateless or- der - not only throughout the area of the Harappan Civilization but also in the neighboring areas to the west or to the east.

Although much has been talked about the 'Harappan ideology', no one has been able to define it even a roundabout way. Thus, the concept of 'ideology' as the controlling lever of the Harappan elite or glue that bound the Harappan disparate groups into nome coherent polity is a diffused idea, to say the least. Repeated references have been made in archaeological literature to an 'ideology', 'class structure', 'hereditary passing on traditions from father to the son", 'temporal continuity of craft traditions" etc. without any reference to concrete examples from any contemporary civilizations. What was, indeed, this ideology in concrete terms, and what example of this do we find in antiquity or in the subsequent social heritage?

In the absence of any written record, the answer to these questions are difficult. As is well known, archaeology does not deal with actions but with things; there is no immediate or obvious method of translating material culture residues into ideology. So we grope our way into the subject which involved ceremonial and repetitive sequences of actions that seek to celebrate or propitiate, to consult or worship, to offer or impetrate, to purify or predict, or to validate change in the social role of status of a person (54). There are now some scholars, especially in India, who believe that, given the strength of tradition within the subcontinent, later social and political systems in India and Pakistan may shed some light on the Indus social system, from which later traditions may have sprung, and this may teach us something about the Harappan ideology. A possible caste-based ideological system in the Harappan Civilization is one aspect of this enquiry.

Heterarchical Relationships: Hierarchy refers to the ranking of elements in society using specific criteria, such as size, complexity, power. Heterarchy refers to the relation of quasiautonomous elements to one another when they are unranked or when they possess the potential for being ranked in a number of different ways within themselves (55).

The social and political organization of early civilizations has invariably been analyzed through a

concept of hierarchical structure; in the Egyptian case with the pharaoh at the very pinnacle of power in social, economic, and ideological terms while in Mesopotamia the kings and priests ruling the cities with a divine right. Such a ruling class have also been identified in other cultures, being wealthier and more powerful than the rest of the populace. Below them are second tier classes, who have limited power and privileges but more than those who are below them So far we have subscribed to such a hierarchical organization in our analysis of the Harappan sociopolitical structure. While this concept answers a number of question about the Harappan society, it fails us in other places. Most importantly, while we assume a hierarchical structure of the Harappan society and take for granted the existence of a privileged ruling class, we do not find much of an evidence for it in archaeological record. This has led some archeologists to look for alternatives, even questioning the basic premises of universally accepted model of social hierarchy as a fundamental element in the organization of a society. Carole Crumbly (55) is a pioneer in this area of research. She believes that this concept would help to understand the calculus of power relations within and between polities and shed light on how power shifts occur and under what conditions, and how various power distributions constitute stable and unstable configurations.

Heterarchical models have been invoked to explain processes of state formation in India and Pakistan in early historic periods where different castes and *jatis* presumably constituted the components of heterarchical rule. We really have difficulty in identifying what such rule would have looked like. These models have also been invoked for some other parts of the Old World, such as West Africa. For example, McIntosh (56) describes the city of Jenne-Jeno in the Middle Niger (400 A.D. to 1100 A.D.) as a self-organized, corporate community in which multiple authorities existed, none of which monopolized power. Under different circumstances, the Maya civilization (300 A.D. to 900 A.D.) was less centralized than once thought. While the great Maya Lords did control the acquisition of status-enhancing goods such as jade, shell, magnetite, and quetzal feathers, their vast and varied agricultural system was maintained by local groups.

In the Harappan context, Kenoyer (37) is probably the only one who uses this concept for elucidating the socio-political structure of the Harappan society but without specifically evoking the term ‘heterarchy’. **H**e proposes that the Indus urban centers were composed of several competing classes of elites who maintained different levels of control over the vast regions of the Indus Valley. Instead of one social group with absolute control, the rulers or dominant members in the various cities would have included merchants, ritual specialists, and individuals who controlled resources such as land, livestock, and raw materials. These groups may have had different means of control, but they shared a common economic system and a common ideology. These members of the ‘governing body’ would have been themselves organized in more or less loosely stratified groups. Kenoyer restate his position, again mentioning 'competing classes of elites', with “the largest cities relatively independent, possibly organized as city-states” (57), the whole integrated by economic, ideological and cultural means. We might call this a communal rule. We might also call it, perhaps with a slightly different take, more oligarchic rule based on the horizontal spread of relations and connections among and between corporate groups. It is clear that such a heterarchical rule would not involve an individual king or a priest. Indeed, balance of power among such communal groups might well be very hostile to the nature and the notion of centralized, individual rule.

Maisels calls such a statement selfcontradictory and thinks that “Kenoyer [and many others] is trapped within older and now inappropriate models which assume that every complex society is state-ordered (19). “The condition of Indus Civilization as described by Kenoyer is such a clear example of organic

solidarity [and] social integration based on complementarity in the division of labor, that Durkheim would have regarded it as archetypal had he known of it. The complexities described by Kenoyer are indeed remarkable, but nowhere does he identify a ruling center or apparatus. Indeed, he specifically excludes a unified ruling class! What he actually describes are competing and collaborating, but essentially diffused, loci of power. The corporative units seem to be something like family/lineage ones, the familial entities sharing a world view of common values and distributed religious powers, both in the organizational sense and in the sense in which pantheism is a complex of distributed powers with no hegemonic center. So shared values and ideology would seem to produce social cohesion with a minimum of coercion. Nonetheless, Kenoyer (37) cavalierly dismisses such considerations when raised by Miller" (19). The crux of Maisels' argument is that there was no need of a political organization in the Harappan society as we know it; although stateless, the society was stable nonetheless.

Kenoyer states that "certain segments of Indus society were trying to differentiate themselves from the rest. These individuals used distinctive pottery styles and wore elaborate ornaments made from carefully worked raw materials, including gold/ silver, electrum, carnelian, lapis lazuli, turquoise and shell. They also required ornaments and symbolic objects made from manufactured substances such as bronze, faience, stoneware and fired steatite, while the rest of the population imitated with poorer materials (37). Maisels considers such a statement meaningless and asks : "Who said that there could be no differences in wealth? The acephalous condition does not demand homogeneity and cannot command it. Over such a vast area and within each part of it, differences in fertility, productivity, organization, skills and occupations, as well as family size, structure, sickness rates and life-cycles, are bound to produce differences of wealth and rank. None of those differentiating factors owes anything to a ruling center or even a dominant elite" (19).

The existence of multiple and walled settlements within an urban center, such as Harappa, Mohenjo-daro, and Kalibangan, is a strong indication of such a social organization. The idea is that the Harappan settlements were politically maintained through multiple autonomous groups, each with its own hierarchy and area of control. But, these peer-polities consisted of tribal aggregates rather than priests, artisan, cultivators, traders, animal herders, etc.

Although Kenoyer lays stress on merchants, traders, and priests representing the various 'competing classes", other archaeologists have identified these on the basis of kinrelationship, taking their cue from historical perspective. Intuition would call us to look at the kinship relations that existed prior to the Harappan urbanization and that, as discussed earlier in connection with the Early Indus cultures, served as the binding force of the society. One would expect that many tribal institutions survived into the Harappan period and in fact played an important role in the formation of its socio-political structure. Rural communities perhaps continued to acknowledge the distinctions of clan and lineage, as in contemporary Mesopotamia, where rulers record that they actually recruited warriors or temple-builders by clan and lineage. In Bronze Age China, the king could send out entire kin groups to found a new settlement and bring land under cultivation. We cannot dismiss this continuance of kin groupings in the Harappan society as is clear from Bronze Age Mesopotamia and China as well as the social traditions of South Asia in the historic times.

Joint ownership of resources may have continued and the mobilization of labour too may have been on kin lines. In short, the Harappan society was most probably an admixture of various social and economic sub-groups, and the Indus cities reflected this microcosm of social heterogeneity. In the

new order, these diverse communities were incorporated into a society wherein a ruling elite using coercion, compulsion, or religious persuasion, had probably begun to evolve but it had few political institutions yet at its command, and thereby had to forge social ties with the emerging elites of other kin-based groups. Thus, the whole power structure revolved around kinship relationships and the peer-polities of these kin-based groups - idiom that the tribal society was well steeped in. The result is that the Harappan society, despite its trappings of wide-spread urbanization, was probably still organized on kinship relations at the core and the Harappan state (or city-states) was built on a tribal foundation, with multiple pillars of kin-based groups on which the urban society was eventually built.

Caste System: It may be asked why the Harappan socio-political structure should be studied only with chiefdoms, complex societies, and early states as reference categories. Could not a hereditary caste structure be a valid alternative category? After all, the stability and continuity of the Harappan material culture is striking, and it may be said that a caste organization must be conducive to such social stability (in the sense of avoidance of overt clashes of interests), to the handing down of technology within hereditary occupational groups, and to the spread of techniques through marriages within endogamous caste-like units (2). This is relatively a new area of research but we would not mind to take a stab on this emerging model.

We start with the premises that something akin to a caste-based hierarchical system may have underpinned the organization of the Harappan polity. (8,37). Indeed, some scholars have been bold enough as to pronounce these views rather forcefully. These views are apparently based on the existence of multiple mounds of major Harappan sites which represented the citadel on the left and the lower city on the right, sometimes each enclosed by a city wall. It can be said that the ritually purer class lived in the citadel area and the common, less pure, people in the Lower Town. Wheeler (58) emphasized this particular feature of the Harappan town planning which suggested that it was a ranked society (59). The same situation probably prevailed even in the Early Harappan times as some sites of the Early Harappan cultures too have double mounds (60). Politically, each group functioned autonomously within their assigned tasks and there may be some hierarchical gradation within each group.

The proponents of such a social and political structure of the Harappan society point out the stability and continuity of the Harappan material culture which is striking. It may be said, as above, that a caste organization was conducive to social stability, to the handing down of technology within hereditary occupational groups, and to the spread of techniques through marriages within endogamous caste units. The question, however, is whether a situation of regional political systems and economic networks can ever be reduced to caste organization, and whether we can simply assume that caste system to have existed since the Harappan times in the form known today. A broader question is whether such a social and economic system could really provide a sound basis of political cohesion. There may have been a caste system in Harappan times, as in later times. But even if this were detectable from archaeological remains, it would leave unanswered the question of political structure and economic system. After all, historians of later periods do not explain town and country linkages, or the rise of regional states, or the ability of rulers to tax the produce of various groups by invoking caste.

Caste system is sometimes identified as a special case of heterarchy but it is a faulty relationship at best. This kind of society, far from heterachical arrangement, is a doubly differentiated and hierarchical system. The only difference is that instead of wealth the criterion of differentiation and

stratification is the concept of ritual purity. Sometimes it is related to the Harappan 'ideology', and the concept of caste a concrete form of this ideology. Some scholars have linked the caste system with the Harappan religion. Many more have interpreted the caste system as a stage of development succeeding the tribal stage, and cast society as representing one kind of socially stratified society, differing from a class society in that the component units of the various strata are not individuals but endogamous subcastes, and in that a caste hierarchy does not accurately mirror the distribution of power and wealth. The traditional village structure is an organic entity, with crucial labor, redistributive and exchange relationships between sub-caste members giving the village economy its coherence. Sub-castes function and survive only in relationship to each other in a network of ritual, economic and political relationships (8).

The Concept of Caste **:** The caste system in India is a system of social stratification and social restriction. Historically, it defined communities into thousands of endogamous hereditary groups called *Jatis*. The *Jatis* were grouped by the Brahminical texts under the four well-known caste categories (the varnas): viz the *Brahmins*, *Kshatriyas*, *Vaishya*, and *Shudras*. Certain people were excluded altogether, ostracized by all other castes and treated as untouchables. Although identified with Hinduism, caste systems have been observed among other religions on the Indian subcontinent, including the Muslims. Caste systems have also been observed in other parts of the world, for example, in Afghanistan, Pakistan, Yemen, even Japan. In Pakistan, the *Jati's* equivalent is the Zaat (identity), *Berader*i (brotherhood) and *Quowm* (nation). Like *Jati*, all these labels stem from the affiliation to certain largely endogamous or linguistic groups. The lines drawn between the peoples of different *Zaats*, *Breederis*, and Quowms are, however, not as stark as those between *Jatis* in India. Endogamy is prevalent but exogamy is not a taboo. All in all, tribal ancestry (the *Quowm* and *Beraderi*) is more important than *Zaat*. Neither *Zaat*, nor *Beraderi* nor *Quowm* is specific to any particular profession although some professions are more common in one *Zaat*, *Quowm* or *Beraderi* than the other. Thus, when we talk about caste system, we essentially talk about India. It is this system, strictly based on heredity, strictly endogamous and generally of specific profession, with which we are here interested in.

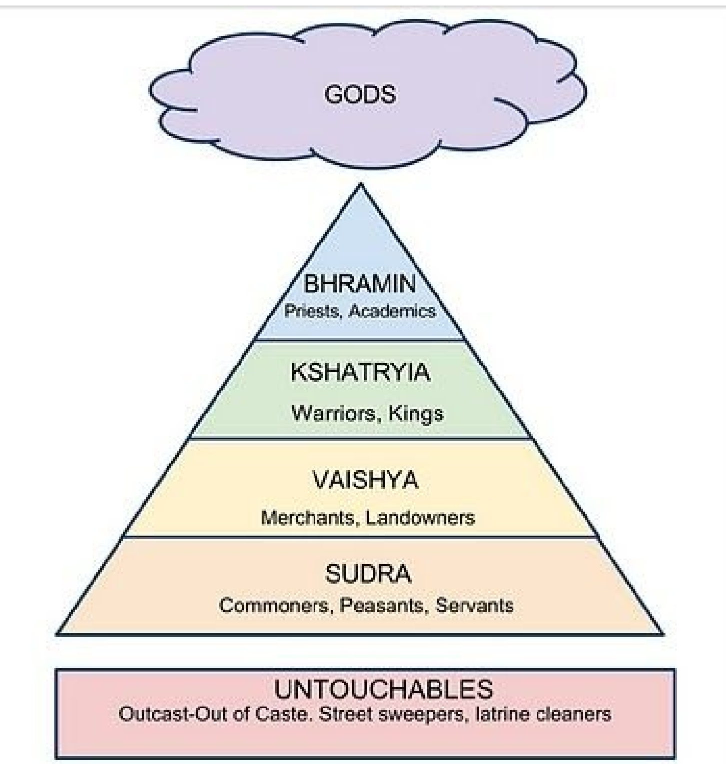
The origin of caste system is not known, although it is attributed to the *RgVeda*. The conventional conception of the advent of caste (the four *varna* categories) is through a form of conquest theory. In it the Aryans, who arrived at the Indus region around the middle of the second millennium, were characterized by three social categories: warriors/aristocracy *(kshatriyas)*, priests *(brahmins)* and the rest *(vaisyas)*, which became a four-caste system on subjugation of the indigenous population, the *dasa*, incorporated as the fourth *varna* of cultivators *(sudras)*. Some see the very term *varna*, meaning color, taken in reference to the dark indigenes excluded from *dvija* (twice-born) purity, as supporting this view. Varnas, however, are just schematic categories. The everyday operational reality of 'caste' is *jati* subcastes - having the literal meaning of birth or species. Indeed, Fox (71) declares that 'it is the *jati* or local endogamous group which is the foundation of the caste system'.

The caste hierarchy of present-day India is complicated and is generally reflected on the division of labor, which, in turn, depends on degrees of ritual purity. Ritually pure individuals require the services of impure individuals to perform tasks that would pollute them. Crosscutting this system, which operates at the level of the community, is a wider network that links all members of a particular caste *(jati)*, wherever they live. All members of a caste group (often organized in historical times into guilds) would look after each others' needs while exercising considerable control over the activities of each individual within it. Allied to the social structure dictated by caste is a redistributive

mechanism known as the *jajmani* system. In this system, all members of the community have reciprocal obligations to provide the products of their labors and certain services to others with whom they have a formalized relationship and that to some extent resembles kinship. Payment for these goods and services is made in kind and fixed by tradition. The payments take place at regulated intervals and often in the context of religious festivals or other special occasions. Such a structured society exists nowhere else in the world.

Some scholars have interpreted the Indian caste system as a stage of development succeeding the tribal stage, and caste society as representing one kind of socially stratified society, differing from a class society in that the component units of the various strata are not individuals but endogamous sub-castes, and in that a caste hierarchy does not accurately mirror the distribution of power and wealth (61). The traditional village structure is an organic entity, with crucial labor, redistributive and exchange relationships between sub-caste members giving the village economy its coherence. Sub-castes function and survive only in relationship to each other in a network of ritual, economic and political relationships. But economic specialization and sub-caste/ caste groupings are not coterminous. There are hundreds of agricultural sub-castes. Two different sub-castes may follow the same profession and retain their exclusiveness; and members of the same sub-caste may follow different professions even under the traditional system.

The role of the religious and social norms in maintaining the caste system in India is often quoted as an example of a “voluntary” submission of the masses to the exploitation of the ruling classes. It is, however, generally overlooked that there has always been the power of arms of the *kshatriya* behind the enforcement of such a social norm. If we envision such a caste-based system in the Indus Civilization, then we must also agree to the use of violent force or a threat of use of force.



A Vedic conception of the *Varna* system. Each Varna is composed of many Jatis (the caste), mutually arranged hierarchically.

The Caste System in the Harappan Context: In the Harappan archaeology, the question of caste system

arose in the face of not finding a clear evidence for a robust class differentiation based on differentiated possession of material goods. If the Harappan society was indeed a stratified society, some other, probably nonconventional, criterion must be found for such a social stratification. Thus, attempts are afoot to replace ‘class’ with ‘caste’ as a basis of social differentiation in the Harappan Civilizatiion. While the former necessitates an archaeological evidence for material unevenness, the latter does not, as in the caste system the society is differentiated by a sense of ritual ‘purity‘ rather than material wealth.

Developing this concept, Daniel Miller stated that “‘the people of the Harappan who may be said to have power may not have enjoyed privileged wealth or conspicuous consumption, and indeed are more likely to have been conspicuous through asceticism” (33) . He suggested that the so-called ‘barracks’ or ‘coolie-lines‘ found within the citadel mounds were more likely to have housed monks than slaves. Consequently, a normative tendency towards Puritanism was identified as a more likely explanation for the social organization of the Indus Civilization. Within the apparently timeless nature of the Indus, Miller conceived a society in which an ‘extreme normative order was valued’ (33).

This line of enquiry has been recently pursued by many, especially in India, putting emphasis on a quasi-caste system around which the Harappan society may have organized itself, and explaining the reason why the Indus culture remain as static as it did for so many centuries. If we accept that in the Indus Civilization there were very strong normative controls underpinning economic integration (organic solidarity), then the subsequent emergence of caste in particular, and historical Hindu society in general, becomes more readily explicable. If there was no tradition of the state in Harappan and post-Harappan society (as there manifestly was in post-Roman European society), then the forms of social integration that caste represents - namely of occupationally based and metaphysically sanctioned stratification without an encompassing state and state religion - simultaneously explain the uniqueness of caste and the ‘churchlessness’ of Hindu religion. The question, however, is whether a situation of regional political systems and economic networks can ever be reduced to caste organization like later-day Hinduism. Dhavalikar (5) and Kenoyer (59) are among those who believe that it was so. These authors believe that while the caste system is the product of millennia of evolution, its origins may well lie in the religious beliefs of the Harappans. The evidence for this position can presumably be deduced from a number of archaeological indicators.

If ritual purity were the key factor in determining status, those higher up the status scale would be identifiable by their possession of artifacts and materials thought to be more pure. In traditional South Asia, materials such as metal that can be purified after use are more pure than those that cannot, such as unglazed terra-cotta. Different styles of particular objects may also be associated with people in different ritual status groups, usable among themselves but liable to be polluted if used by individuals of lower ritual status: For example, at Mohenjo-daro Dales and Kenoyer (62) identified five different varieties of cooking vessel that might have been used by different status groups.

Another factor is the association of different groups of people with different amenities and with different professions. Kenoyer (59) has singled out a number of features relating to a hierarchy based on communal specialization that is so visible in the material record: segregation of living areas; private water sources, drainage, and waste disposal; and distinct types of vessels for preparing, cooking, and serving food, and the emphasis on privacy in the home, exemplified by the arrangement of the entrance to prevent the direct viewing of or access to the interior courtyard. This evidence is strengthened by the presence of a large number of private bathrooms in Mohenjodaro and other Indus

sites.

A relatively strong evidence comes from the settlement pattern of major urban centers, such as Harappa, Mohenjo-daro, Kalibangan, and Lothal. Kenoyer points out the existence of separate sectors in the Harappan settlements, such as the walled citadel (though he notes the absence of such divisions in some small sites such as Allahdino). The general impression is that the Harappan townships were divided in two parts, the Citadel and the Lower Town. However, Lal (6) has noted that at Kalibangan the habitation was distributed in three distinct localities. Of these the Citadel and the Lower Town were fortified. Lal therefore infers that there was a threefold division of the society: (1) a priestly class living in the Citadel, (2) an agriculturist-cum-merchant class living in the Lower Town, and (3) a workers class living outside the two fortified areas. Recent evidence, however, shows that there were not three but four localities at Kalibangan, distinctly marked and properly segregated (5). At Harappa were also more than two townships and a rudimentary settlement outside the walls. At Mohenjo-daro, the Lower Town was separated from the Citadel by a 150 m ditch. It is highly likely that there was a residential area in the outskirts of the city.

Based on this apparently multi-tier settlement of Harappan cities, Dhavalikar (5) proposes that large Harappan urban centers were divided into three or four sectors as the evidence from Dholavira clearly establishes (63): the city was divided into four parts: the citadel which was occupied by the ruling class; the bailey or the Noblemen's quarters; the Middle Town for the agriculturists, merchants, craftsmen and traders; and the Lower Town for the menial workers. The most noteworthy feature of this fourfold division was that all these sectors were separated from each other into ‘water tight compartments’ by surrounding walls, making them sort of 'Ghettos' of medieval Europe. Even at Harappa four such localities can be identified; besides the Citadel (area AB) and the Lower Town (Mound E), there is area G , as also area F (64), each sector probably inhabited by a separate ‘caste’. This presumably fourfold division of the society into four classes, living separately, is no doubt significant as it reminds us of the *varna* system prevalent in the Hindu society throughout its post-Harappan history, but it would be inappropriate to read too much in this coincidence. There could be other explanations.

Additional archaeological evidence is cited to bolster such views. For example, the excavations on Mound E, which was not formerly excavated, has yielded evidence pointing to the fact that it was occupied in the Mature Harappan phase by craftsmen, particularly those engaged in pottery manufacture, shell cutting, flint knapping, etc. There was clear evidence of craft specialization indicating that 'these crafts were extremely complex and involved technologies that would have been known only to a limited segment of the urban population' (65). The same seems to be the case with the HR area at Mohenjo-daro where there was evidence of localized crafts as also occupational specialization (66).

Furthermore, it is noteworthy that in the earlier excavation at Harappa, Wheeler (58) found a whole street with stone mortars for dehusking grain or pounding it into flour. Piggott (67) identified the area as that of slave quarters, or place of government enterprise where slaves pounded cereals. To Iravati Karve (68), it was 'a street lived in by a caste-like group who specialized in pounding rice'. It is interesting to note in this context that similar evidence is also available in Buddhist literature. A Jataka story described a street in a city in Buddha's time (sixth century BC) as being occupied by carpenters, or the story of Vidubha, the son of Prasenjit, a king of Kosala, who was a contemporary of Buddha, and in whose capital was a street where only laborers lived. This tradition continues till today in the

villages and towns of India where different caste groups, especially the craftsmen, live in separate areas as far as possible.

If the caste system existed in the Harappan Civilization, it was not an invention of this society altogether: some sort of ranking also existed even in Pre-Harappan times as the recent evidence from pre-urban Harappa would indicate. In the Kot Diji period of this settlement, the village was segregated into more than one inhabitations through surrounded by walls.There are over thirty Early Harappan sites of which at least fifteen are represented by double mounds, and there may be many more. Since the Early Harappans substantially contributed to the making up of the Harappan Civilization, it is highly likely that the Early Harappan was a ranked society and this ranking may have been hereditary. The excavation of Mound E at Harappa revealed evidence indicating that even in the Early Harappan times craftsman had occupied that locality. This would reflect the hereditary nature of craft specialization. This, however, does not automatically mean that we are looking at a caste-ridden society like the present-day India.

Iravati Krave is one of the most prominent advocates of this proposition, saying: “The author feels that the *'jati'* system which allowed innumerable different endogamous groups to live separately is entirely different from the *varna* system which divided all society into four ranks. The *jati* organization or something very like it was in existence in India for a very long time, the author thinks, even prior to coming in of the Aryans. In course of time, the *varna* system was modified and the *varna* and the *jati* were interwoven together to form a very elaborate ranking system” (68). She adds further: “It is wrong to suppose that the *varna* system arose out of consciousness of racial distinction as indicated by skin color. The Aryan world was made up of the three classes: priests, noblemen and commoners. All the people worshipped the same gods and underwent the same rituals from birth to death” (68).

Romila Thapar, an eminent historians of India, also supports this hypothesis in some of her writings. Avowedly taking “the help of social anthropology”, she notes the probability of caste as pre-Vedic system and part of the social stratification in the Harappan culture, where a small group may have preserved itself through strict endogamous marriages, claimed ritual purity and higher status, and also exercised authority in a hierarchical social set-up based on a division of labor with the notion of polluting attached to certain groups of menial workers. She even finds in caste the answer to the vexed question as to who was in authority and how that authority was maintained in the Harappan culture.

Despite the absence of a robust evidence for a sharp class differentiation in the Harappan society, its existence is not in doubt any more. Does caste rules out class? Consider the formulations of Romila Thapar (69) on the development of the first states in the Ganges valley: Thapar shows that the ritual ranking of *varnas*, notions of purity and pollution, and occupational divisions did not coincide exactly with economic status in early history of India. She conceives of the *varna* system emerging as an aspect of stratification, but predating class divisions in society.The territorial rights of the *Kshatriyas*, their leadership in war, their ability to give feasts and distribute wealth i.e., their increasing political and economic power, are clear.

There are, however, descending voices against the origins of caste in the Harappan Civilization. Berriman (70) sees the caste system as emerging “at the watershed between kinbased, unstratified, pre-state institutions of inequality and class-based, stratified state-organized institutions of

inequality”. According to him, this time has to be post-Harappan, but with its full form emerging only after the Aryan migration into Punjab. Accordingly, the system's roots must lie in post-Harappan 'Dark Age' social circumstances of 'coexisting, culturally distinct, largely endogamous groupings with perhaps a degree of economic specialization and interdependence within regions”, as Berriman puts it. The “Indo-Aryans placed themselves and those they could not dispossess of their land in the elite castes - those in the three 'twice-born' *varnas* at the top of the hierarchy - appropriating to themselves the land and labor of those they dispossessed. The latter, in turn, had little choice but to assume their assigned, economically enforced, and ritually endorsed social roles and statues, to perform their assigned tasks, and to contribute the corvee *(begar)* labor, clientship *[jujmani]*, rents, and taxes imposed upon them in the peasant economy of the emerging state” (70). It seems a reasonable conjecture that a minority incoming population, especially if pastoralists as the Aryans predominantly were, would adopt the occupational pattern of a majority population in settled agricultural villages. “There can be no doubt that the newcomers imposed themselves as dominant classes, but the peculiar elaborations of caste based on occupation could not simply be the outcome of a ruling class imposing itself”. Many Indian historians, especially those who believe that there was no Aryan migration, would, of course not agree with such a description.

In the absence of tangible data, the detailed reconstruction of the Harappan society to support a socio-political structure as a caste-like arrangement can be regarded as exceedingly speculative, for although the notion of ritual impurity may be exemplified by the Great Bath at Mohenjo-daro and the existence of separate quarters for grain-pounders at Harappa is admitted, evidence of division of labor and occupational groups on the basis of ritual purity and impurity is wanting. There is no trace of the continuity of caste in either the Late Harappan period or their transition to the RgVedic period. The material culture of the Vedic period (ca. 1000-500 BC), for which we have copious literary evidence, is glaringly different and comparatively much less advanced than that of the Harappan Civilization. They are two utterly different societies and cannot be compared for the development of a common institution. In short, while it is possible that the elements of caste could have been present with the Harappan people, we do not see any clear evidence for it. Although there are probably some similarities with later historical societies in which asceticism and monastic order are predominant, there is no example in which certain of these traits are so elaborated over a comparable area and time.

Summery: Now, if the Harappan Civilization was a stateless society, how did different strata of the society interacted with each other, how the social balance attained, how was it maintained for such a long time, and how such a high culture was attained and spread over such a large areas? In the absence of state, even a city-state, how law and order was maintained? What was the glue that kept the civilization together. In short, what was the organizational basis of the Harappan society? These questions have been discussed from the very beginning of the excavations at Mohenjo-daro and Harappa, and answer have been given from varied angles. Some of these opinions have already been discussed in the foregoing chapters, a few are given in the followings, mainly, but not exclusively, based on the premises that the Harappan Civilization was a stateless society.

Shereen Ratnagar (8,72) argued that when a state emerges in the Bronze Age, kinship organization does not erode away, but kin groups continue to play important social and economic functions. The development of first states occurred in contexts of limited commodity production, a low level of division of labor, and, most important, communal land ownership, and a relation which was formally reciprocal, prevailed between sacred ruler and populace. Such a relationship was expressed by rituals of sovereignty, tribute, and forging of social bonds. Administrative institutions and revenue systems,

as well as separation of subsistence production from trade and crafts, were yet incipient, and true bureaucracies absent, so that relations between ruler and ruled had to be realized in personal terms. The Harappan society must represent this transitional stage, where a highly complex society functioned without a fully developed state.

Intuition would call us to look at the kinship relations that existed prior to the Harappan urbanization and that, as discussed earlier in connection with the Early Indus cultures, served as the binding force of the society. The population more or less consisted of self- sufficient villagers, unified by the morality and obligations of kinship, of sharing the earth's resources, and the obligation to labor together, give mutual support, and be generous to those related by blood or marriage. In the new order, such communities were incorporated into a society organized as a state (or a collection of states) with newly-emerged ruling elites using coercion, compulsion, or religious persuasion, but having few political institutions yet at their command, and thus having to forge social ties with subject groups in the idiom of kinship, an idiom which the tribal society was steeped in. Thus, the Harappan society, despite its trappings of wide-spread urbanization, was probably still organized on kinship relations at the core and the Harappan state (or states) was built on a tribal foundation.

In general, the Harappan Civilization can be seen to have been a stratified society, although the basis of this stratification may not be differentiated possession of wealth. The subsistence base consisted of intense agriculture and animal husbandry. Stone plows were used for intensive tillage, and cattle bones suggest the possibility of draft animals Sufficient surplus must have been produced to support the lapidary workers, seal carvers, and potters, whose work is found not only in the service of city elite but available even to the residents of small villages. Craft specialization is an indication that skilled artisans existed on a substantial scale, not only in large cities of Mohenjo-daro and Harappa, but also in industrial towns, such as Chanhu-daro. These artisans no doubt existed in villages, although in small numbers. Of course, not all specializations were practiced in all settlements and an extensive network of exchange in crafted goods existed. These trade contacts not only consisted of inter-city exchanges but long distant contacts, as described elsewhere in detail.

It is not necessary for the purpose of this discussion to insist that the Indus society was a full-blown state or the Harappan cities were wellorganized city-states. However, there are lessons for the trajectory of state formation, or a lack of it. Not every early experiment in stratified societies blossomed into a state or empire and not every city in antiquity was organized as a city-state. A rhythm of regional cultures, each finally merging into one grand tradition, may or may not have given birth to a centralized state or a commonwealth of city-states, appears to pulsate for two thousand years in the Greater Indus Valley. Nowhere is any evidence of coercion, of warfare, of true writing. It is, however, important to note that a high degree of social complexity had been achieved. It may be that the Harappan Civilization withered away before it could attain a fully functional statehood. Wether the Harappan was a state or a stateless society is just a theoretical issue; the reality is its high culture, its magnificent cities, its crafts, its vast area of influence, its long duration, its long distance trade, its maritime activities, its superbly carved seals, its handsome pottery, and its artistic achievements.

It has been often repeated in the preceding pages that a very specific and shared cultural sense of a Harappan world was independent of the presence of a pan-Indus state. This cultural sense of the Harappan Civilkization can be seen most clearly in its absence, that is, after the collapse of the Civilization in the early second millennium BC. After this time the ruling elite did not think of

themselves as “Harappan”, and the land along the Indus and between its tributaries existed as part of a larger and non-Indus pastoral order in which it was firmly embedded.

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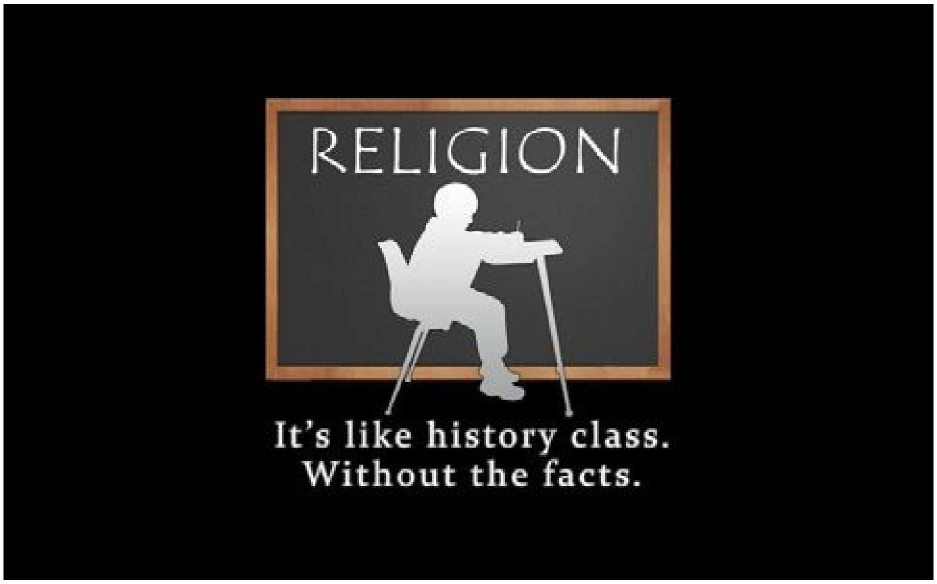


SECTION II

I.1. Religion in Early Civilizations
II.2. The World of Gods and Goddesses
II.3. The World of Mythology, Cults, Rituals, and the Sacred II.4. A World of Spirits, Magic, Divination, Shamanism, and Amulets II.5. The Indus Heritage and Hinduism

Section II

R e l i g i o n



This section deals with the Indus religion and all what the term ‘religion’ entails. The title is, however, somewhat misleading as it implicitly points to the

existences a set of core beliefs and rituals in the Indus Valley, which we could probably call religion. This may not necessarily be the case because no such unified system of beliefs may in fact exist. The title is also misleading in another sense: it implies that the Harappans had one single religion throughout their realm and throughout the time period that the Harappan Civilization covered. This can in no way be true. While studying the evidence for religious beliefs and practices of the Indus people, therefore, we should guard ourselves against any assumption that there was an organized religion and priesthood in the Harappan Civilization as it was, for example, in Sumer and some other early civilizations or as it is found in later societies. It could well be that different sections of the population had their own cults and deities and that these cults and deities differed from region to region or even from one group of people to the next in the same region. We should also entertain the possibility that the Harappan society did not even know any discrete gods and goddesses and that their beliefs and practices were merely an extension of the Paleolithic universe of spirits, magic, myths, shamanism, animism, talismans, and amulets and that these beliefs changed with the passage of time.

The term ‘religion’ is an example of the imposition of a modern label on the ancient worlds. Many cultures, such as those of Greece, the Aztecs and the Incas, have no single-word equivalent to ‘religion’. Separating out a culture’s perceptions of god(s) or spiritual forces from its economic, social and political life is not simply difficult, it is misguided. The perception of religion as a matter of private personal belief is a particularly modern, western and rather Protestant idea. Some ancient cultures did have complex ‘theologies’, but in others ‘religion’ is more a matter of duty, either to the elders or to the (ultimate) powers, a matter of practice, not of doctrine. But ‘religion’ is a convenient term, providing it is not taken too narrowly, to look at the ancient worlds’ perceptions of their place in the order of things, in understanding their duties, aspirations, fears and not the least the remarkably widespread belief in a life after death.

Second only to language and script, the religious activities of the Harappans have been the focus of much speculation: their relevance to the intangible values of the Harappan society is self-evident. Did they have a single belief system or there existed multiple religions? As in modern Pakistan, was there

a fascinating amalgam of diverse religious beliefs or there existed a set of basic dogmas just like those that characterized Islam, Catholicism, or classical Judaism? Did the religion of the Harappans spread to the other populations of the area, such as the modern-day India and Afghanistan? Was the Indus religion a reflection of faiths prevailing in Central Asia and Iran at that time? Were the Harappans' religious beliefs related to any modern religion? And above all, did the Indus religion have anything to do with the development of Hinduism? These subjects, starting from Marshall's original study, have been the topic of intense discussion and diverse speculations; we shall touch upon some of them in the following pages.

Indus religion has been studied by a large number of scholars, some of them archaeologists, anthropologists, social scientists, and by some of those who go by the name of 'Vedic scholars'. A plethora of publications, some of them in book lengths, have appeared in the past several decades in India, the purpose of which is largely to prove the antiquity of the Hindu religion and the Indus Civilization provides a convenient anchor. A large number of these publications go on to claim that the Harappan Civilization was 'Vedic' and ancestral to present-day Hinduism. Thus, the Harappan religion can be derived from the RgVeda or, conversely, Hinduism can be derived from the Harappans. The Internet is cluttered with these notions, nourished by a healthy doze of super-nationalism and a nonstop feeding on religious cockiness. We are not concerned here with 'Vedic scholarship' but are not adverse to the examination of the Harappan heritage in the later religious thought and practices in Pakistan and India, if we happen to find any.

In spite of this clutter of idle talk, useless speculations, an uncontrolled religious frenzy, the world of myth-making, and rambling polemics, there have been a few serious attempts in the past century to understand the religious beliefs and practices of the Harappan people. The first such statement, of course, comes from Sir John Marshall and his staff (1). His chapter on the Indus religion is a must read although most of his conclusions have recently met with profound reservations.

Later publications on the Indus Civilization by a number of prominent archaeologists invariably touch upon the Harappan religion, mostly in line with that of Marshall's analysis. Some of these are listed in the Bibliography at the end of this volume. Shubhangana Atre's paper on "*Harappan Religion: Myth and Polemics*" is worth mentioning as a serious attempt connecting the classical Hinduism with the Harappan religion (2). Herbert Sulliman's article, *A Reexamination of the Religion of the Indus Civilization* (7) is another serious attempt in analyzing the commonly perceived image of the Harappans' religion as derived from Marshall's interpretation. Equally important, perhaps more so, is the chapter on religion in Shereen Ratnagar's *Understanding Harappa* (3), wherein she reviews the evidence in its totality and debunks a few myths about the Harappan-Vedic-Hinduism connection, drawing our attention to the archaeological evidence which should indeed be our primary focus. Another important paper is that of During Caspers *Ritual and Belief Systems in the Indus Valley Civilization* (4) which supports the basic premises of Sullivan and Ratnagar, providing important archaeological evidence which is generally missing in such discussions. Doris Srinivasan has tried to disconnect the unholy connection between Hinduism and the Harappan Civilization in her *Unhinging Siva from the Indus Civilization* (15).

A comprehensive, treatment of the Harappan religion is by Gregory Possehl in *A Handbook of Ancient Religions*, edited by Hinnells (14). He recounts the hypothesis of John Marshall with considerable relish, calling Marshall's comments on Indus religion "perhaps the most sophisticated of his thoughts on these ancient peoples", while Ratnagar terms the Marshall's theorizing an "old

Sacred Truth about Harappan religion .... established by a faulty footnote in the general analysis of John Marshall" (3). There are also a few other research articles, such as that by Thomas McEvilley (9), Hiltebeit (10), Parpola (11,12), and Allchin (13). We have borrowed here extensively from these sources, especially from Atre, Ratnagar, and Sullivan.

The study of the Harappan society and its religions is not static, but rather an ever changing picture. Unfortunately, reconstructing a picture of this civilization can be like putting together a jigsaw from which many, and important, pieces are missing, and scholars must attempt to do so without knowing what the final picture should look like. The painstaking task of interpreting Harappan sites which are not fully understood, and fragmentary seals and tablets, along with other artifacts, is a labor of love. But the excitement of doing that jigsaw is a major drive behind some of the greatest scholarship in this field.

Modern writers commonly come from industrialized urban environments. Trying to stand aside from their conditioning in order to understand ancient, often rural, artifacts requires a leap of imagination as well as considerable scientific archaeological expertise to attain a deep insight. Some scholars approach ancient cultures with their own agendas. For example, as an earlier school of biblical critics sought a better understanding of ancient Israel from studying the civilizations of Ugarit and Mesopotamia, some of the Indian archaeologists and 'Vedic scholars' seek the origins of Hinduism in the Harappan religion. Studying some of the great writers of classical antiquity, either in China or Greece, or contemplating on the mysteries of the Vedas does not prepare us for an understanding of the broad religious practice of the time. Artifacts and structures are often the possessions of the rich and powerful ruling classes, and may reveal little of the general culture and religion of the ordinary people.
Any interpretation of the Harappan religion is immediately beset by grave difficulties which render it completely hypothetical. First, there is the fact that there are few items, if any, which have an obviously or unquestionably religious significance. For example, there is no unambiguous evidence for the existence of a temple or religious shrine in the Indus sites. There might have been such buildings, but on the basis of the archaeological remains we cannot clearly recognize any. As for possible cult objects, we encounter, as Wheeler reminds us, "the notorious incapacity of material symbols to represent the true content and affinity of a religion or belief", as well as "the indivisibility of religious and secular concepts in ancient times."

We are entering here into one of the most complex and poorly understood aspects of the Indus Civilization, even more speculative than the social and political organization of the Harappan society, discussed in the preceding Section. It is much more difficult to reconstruct plausible models for Harappan religious ideology than its social, political and economic system. In the absence of decipherable written texts, access to this largely mental world is mainly speculative and the explanations given here can at best be only plausible.

In order to have a glimpse of the Indus ideology and religious beliefs, archaeologists have looked for those features in the archaeological record that are believed to be related to religious practices and performance of ritual. Evidently, these interpretations still require a "bridging framework" to take us with greater confidence from the material world into the world of the abstract. Such frameworks are varied and they are provided by the comparative analyses of a relatively large sample of early complex civilizations which have been studied with the help of their written record. The identifiable regularities in selected aspects of their social behavior can be useful in shedding light on the

Harappan case.

Besides these comparative studies of early civilizations, our evidence comes from several other sources: a) religious architecture, if any; b) the iconography on seals, tablets and amulets; c) archaeological remains that may represent religious paraphernalia; d) graves, which may indicate the beliefs of the survivors in life-after-death; and e) ethnographic considerations, that is, looking back on the past from the vintage point of the present. Of these, the Harappan iconography is, perhaps, the most useful. Amongst these we can look for the portrayal of deity-like entities, for example, figures wearing animal horns, or a particular iconography of human body and animal head, tail and hoofs, or a combination of animal and human torsos. There are a number of tablets from Mohenjo-daro and Harappa which depict some aspects of the Harappan mythology, these can provide material for fruitful speculations. Pictographic writing symbols have provided another source of speculation on the Harappan belief system.

Archaeological contexts like hearths, grave construction, cremation urns, the vicinity of wells, or crossroads could be more significant for artifacts associated with ritual than garbage or general discard contexts (on streets, in rubbish pits, etc.). One could detect ritual buildings in the repetition of features like monumental entrances, location of entrances in a particular direction, orientation of corners or niches, and fixtures like benches, platforms or drains. Some aspects of Harappan religious practices would have been highly ceremonial and public, as at the Great Bath, but there would also have been domestic worship, as also local cults, village rituals enacted under trees, and so on. It is also necessary to consider the existence of shamanism in Harappan religion.

The terracotta figurines, community hearths (which some may call the ‘fire altars’), wells, abundance of private baths in individual houses, etc. can also provide us with some indications to the Harappan religion.The burial rites could be another important indicator of the Harappan belief system and some of these become evident from an examination of graves and cremation urns. Some of the dead were buried with pottery - an average of fifteen pots - and, sometimes, joints of meat (animal or chicken bones are occasional finds in graves), which indicate the provision of food and drink for the journey to the nether-world.

The more I study religions the more I am convinced that man never worshipped anything but himself.

Sir Richard Francis Burton (1821-1890)

Finally, many theories have embraced religious inferences from classical and present-day Hinduism as clues towards offering information on the Harappan religion. Because many aspects of South Asian life show continuity with the past, traditional South Asian religions have frequently been taken as a faint reflection of the past practices, going back to the Harappan Civilization. Although some scholars have taken these inferences to an absurd level, their efficacy in understanding the Harappan religion can hardly be denied.

In spite of a number of relevant signposts available to us, the reconstruction of spiritual beliefs of people from the surviving material artifacts is risky. Of the variety of archaeological finds from Harappan sites there are few items, if any, which have an obviously or unquestionably religious significance. There is no unambiguous evidence

for the existence of a temple or religious shrine in any Indus site. There may have been such buildings, but on the basis of the archaeological remains we cannot clearly recognize any. As for possible cult objects, we encounter, as Wheeler

reminds us “ the indivisibility of religious and secular concepts in ancient times” (8). Moreover, the fact that we are still unable to read the Indus script is a serious obstacle to a complete understanding of the finds, especially the seals and tablets on which these notations appear.

The culture known as the Indus Civilization is both puzzling and fascinating in the paradoxes it presents us. By analogy with similar cultures in the Bronze Age, the urban complexity which characterizes the Indus Civilization would seem to guarantee the presence of a centralized government of rulers claiming divine authority, perhaps even divine descent. Although the structures like the Great Bath and the Pillared Hall at Mohenjodaro, cannot be ignored as they may have some religious functions after all, archaeological records to date do not show any structural remains which can be readily recognized as temples and sanctuaries or that can be regarded as fulfilling a religious function.

The absence of ostentatious buildings and facades in the Harappan realm says nothing of a priesthood, which may or may not have been present. We could consider the possibility of an individual anointed as the supreme religious leader, a kind of Harappan Pope. But it is just possible that this, too, was a weakly developed part of the institution and that priests, if present at all, were not organized into a hierarchy, but functioned more individually, as they do in Islam, Hinduism or Buddhism. We just do not know how the Indus people organized themselves in this area, and there does not seem to be a class of evidence in the remains of the Harappan Civilization that will answer the question, as intriguing as it may be.

The primary object of collective or individual worship in the Indus Civilization was definitely not an overarching God: there is no archaeological evidence for it. It may be the family or clan’s ‘mother goddesses’ but more probably the spirits of epidemics, drought, flood, fertility, and the like. Examples of such worships, collective or individual, are common in India even today. The object of Harappan worship could as well have been the ancestral spirits: this is manifest in modern Pakistan in the virtual worship of deceased saints who are generally specific to specific communities and specific geographic areas.

It appears that the practice of religion may have been a rather individualized obligation, possibly done in the home by family members without significant amounts of paraphernalia. This is perhaps the most appealing suggestion to emerge from the study of the Indus system of beliefs because it is so harmonious with the artifactual and architectural evidence. Nevertheless, there is some direct evidence for public performances of a somewhat religious nature. This comes from the two sealings from Mohenjo-daro that show a procession with participants carrying banners, statues of cattle, and what may be models of the "standard" that is generally found in front of the unicorn on the stamp seals.

With the cultural uniformity that seems so clearly implied by the Mature Indus remains, there is still a chance that there never was a single Indus religion, but simply the sum of the belief systems of the peoples we see united within the archaeological context, as suggested in Wheeler's use of the term *Harappan religions*. On the other hand, there was an intense communication throughout the Greater Indus region that would have promoted a corresponding amount of change, adjustment, synthesis, and

sharing of the older, diverse beliefs of the non-urban stage and the emergence of an ‘Indus religion’ would not be out of place.

Some scholars, such as Shereen Ratnagar, conclude that instead of a clear-cut dominant and complex ideology at the service of the Harappan society, say one that drew on and unified local or regional cults and evolved a pantheon that incorporated the deities of multiple groups, there may have been simply a ‘primitive’ mind at work, feeding on confusion, contradictions, fear, and hope. In this state of affairs, the sum total of the religious thought could not be more than a collection of isolated myths, taboos, and superstitions, kept alive by shamanic practices of the Bronze Age.

Quite a few material elements of the Indus culture seem to have survived the passage of time both in Pakistan and India into modern times. It is but natural that some religious beliefs could have also survived. The frequent political upheavals, repeated foreign invasions, and finally the advent of Islam have made the ancient beliefs rather difficult to trace within Pakistan. However, there is a strong possibility that some of the ancient beliefs and rituals could have survived in India within the larger milieu of Hinduism. There are all the reasons for us to suspect that the Indus Civilization may have provided a logical, if somewhat arbitrary, starting point for some aspects of the later Hindu tradition. These parallels could be used to reach an understanding of the Indus religion or religions but one must proceed very carefully and cautiously.

A complete discussion of the cultural and historical connections, suggesting the process whereby the Indus cultural tradition met and was accepted by the Vedic people, is more properly part of a separate discussion of immense proportion. There are, after all, continuities other than religious ones to be considered. It will be foolish to deny any Harappan remains in the popular religion of India but, given the Vedic impact on postHarappan societies and given the pre-existing local religions of the Gangetic plains, these Harappan remnants must have been very few and far between. Since we know little, if at all, about the religious thoughts and practices of the aborigines of the Gangetic plains and South India where early Hinduism essentially developed, we cannot put any emphasis on the influence of the Harappans on the Hindu thought and practice. There is at least a period of one thousand years that intervenes between the demise of the Harappan Civilization and the first contact of the “Harappan thought” with the peoples of India.

There are two themes that come through in this review of Indus religion. The first is diversity of iconography; the second is the absence of a robust representation of religious institutions. Other elements that jump out for attention are the Harappan obsession with water and the diverse practices for burials of the dead. A dichotomy of female/male and plant/animal can also be observed although its importance seems to have been overblown. The most important of all, we must not forget the role that the world of spirits, shamans, and magic played in the life of the Harappans.

In this Section we invoke each of the above mentioned approaches toward constructing the spiritual life of the Harappans and their religious institutions. However, before we take on the Indus Civilization, we provide a brief review of the religious beliefs and practices of some early civilizations primarily based on the recent research of Bruce Trigger (5). These better-researched early civilizations could provide us with some parameters against which to assess the religious beliefs of the Harappan people and possibly shed some light on the working of their society. Bruce Trigger did not include the Harappan Civilization in his study and, barring a brief note by Rita Wright (6), this comparative approach to the Harappan Civilization has not been undertaken by any Indus

scholar. It is thus not yet clear how the Indus religion fits in the general pattern of early civilizations. Future research may provide us with such a relationship. In the meantime, this may lead us to some intuitive, although tentative, readings.

We begin the review of Harappan religion with the examination of the conventional wisdom, that is, the world of gods and goddesses; followed by looking for possible rituals and ritual objects; and then encountering mythological features of the society at large. At the end, we broach the topic of shamanism and magic, which has been a hallmark of less complex societies in human history. And, before we leave the scene, we indulge in a sort of rambling polemic, trying to discredit the misconceived idea that the later Hinduism somehow originated in the Harappan culture.

These multiple approaches and converging lines of evidence may bring us somewhat closer to the Indus symbolism, ideology, and religion. Still, whether based on archaeological indicators, direct historical analogies or cross-cultural and comparative ones, each is only a vehicle through which we may come to approximate the religious practices of a long-dead culture.

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Chapter II.1.

Religion in Early Civilizations



All ancient civilizations exercised an intense fascination for the supernatural. This chapter briefly tells the story of their religions, tracing their beliefs from ancient Egypt, Mesopotamia, Aruba, the Aztecs, the Mayas, and ancient China. Each set of religious beliefs and practices is described in its cultural and historical context, through a range of different sources, but mostly relying on the description of Bruce Trigger

(1), enabling the reader to obtain a rounded view of the role of religion in these ancient societies. Trigger did not include the Indus Civilization in his review. This has been done, however, in another excellent volume, *A Handbook of Ancien*t *Religions*, edited by John R. Hinnells (18), which provides an equally global perspective on ancient religions. These comparative studies, and some others, of early civilizations involve the examination of a relatively large sample of cultures in order to determine whether there are regularities in selected features of social behavior among them. Although these commonalities cannot be applied uncritically, they provide an entry point for further inquiries and more in-depth study of materials from a specific culture.

Writers in general often make certain presuppositions about ancient religions. One is that these religions are necessarily ‘primitive’, ‘simple’ or ‘underdeveloped’. That is not an assumption made here. Ancient societies and cultures were often complex. Some of the cultures interacted. Greeks met

Egyptians; Romans encountered the tribes of northern Europe; there was trade between Mesopotamia and the Indus Valley, and there were long-standing cultural contacts between ancient Pakistan and Iran as well as Central Asia; there must have been some cultural interaction between the peoples of the Indus Valley and the hunter-gatherers of the neighboring areas to its east. Some religions were genetically related, notably those of the Greeks, Romans and northern Europeans which derived from a shared Indo-European heritage. Though some were largely cut off from other cultures, notably the Chinese and the Aztecs and Incas, few ancient cultures were in hermetically sealed 'packets'. A form of 'interfaith' activity occurred then as now, sometimes in the form of conquest, but also simply out of interest, for example the Romans' fascination with Egypt and Mesopotamia.

In the nineteenth and early twentieth centuries, scholars assumed that there had been an evolution of religion comparable to evolution in the biological world. That is, they assumed that religion progressed from a belief in many gods to the peak of the evolutionary ladder represented by an ethical monotheism, exemplified in Judaism, Christianity, and Islam. As the discussion in the following pages will show, behind what modern commentators see as crude notions, there may well have been a profound understanding of human life. The word 'magic' is another term which is sometimes used uncritically to refer to the belief in the efficacy of prayer made by members of a different religion or culture. Is 'magic' not another name for 'miracle"?

Religious ideas of early civilizations were diverse. Nevertheless it is noticeable how widespread some phenomena are: concept of gods and goddesses, visualization of afterlife, divination, astrology, the veneration of ancestors, the idea of the divine dwelling in material forms on earth, the shamans, and the faith-healers. It is clear that religions of each of these societies reflected many common concerns and aspirations. Human beings with similar resources and addressing similar problems independently used similar ideas, symbols and solutions. Yet the ancient worlds were different from the modern urban culture, and seeing just how and why they were different is part of the intriguing nature of studying comparative religions in early civilizations.

None of the early civilizations studied so far was found to be monotheistic. As a way of surmounting their fears and uncertainties in an uncertain world, people in these early societies created rich pantheons of deities who represented natural phenomena, such as gods of water, air, or sun. In myths and legends, gods and goddesses engaged in activities in which they attempted to control unpredictable aspects of nature, for example, ensuring adequate rainfall for the cultivation of crops and the rising and setting of the sun at appropriate times of day. The power of the gods and the ability of people to appeal to them preserved the natural order of things.

Ancient peoples used a highly symbolic vocabulary in both literature and imagery to represent this association of gods with specific natural phenomena. Because people viewed humans, nature, and supernatural beings as part of a single universe, gods and goddesses were often represented as half human and half animal or were associated with specific plants and animals. Gods, goddesses, and heroes portrayed in myth and image engaged in the ordinary difficulties people encountered in the real world while at the same time being challenged by supernatural forces. Many readers will be familiar with the wellknown Mesopotamian Gilgamesh epic, in which the hero struggled with his own mortality. Along with his companion and friend, Enkidu, Gilgamesh killed the Bull of Heaven who had set out to punish him because he rejected the affections of the goddess Inanna.

All the civilizations Trigger studied and those covered by various authors in Hinnells' edited volume

were craft-producing, agrarian or pastoral societies. In each they found that people's close association with nature may explain aspects of their religious views. In all the cultures studied, people viewed themselves as a part of the natural order of things and they made no distinctions between natural, supernatural, and social realms.They believed that the universe was animated by powerful forces that possessed humanlike personalities (1).

People who lived in early civilizations believed that it was possible for them to interact with the natural-supernatural realm in much the same way that they interacted with other human beings, especially very powerful ones. They hoped, by communicating with the deities who pervaded the natural world, to win the favor or at least avoid the anger of the powerful supernatural forces that controlled the cosmos. This meant that what we identify as the natural and the supernatural were regarded not as separate from but as intimately linked to and interpenetrating the social realm. Human beings could communicate with a supernaturally animated natural realm much as they communicated with one other.

Gods and goddesses, ancient mythologies, cosmologies, and religious symbolism are common topics under which the religious beliefs of Bronze Age civilizations, including the Harappan Civilization, are discussed. Mesopotamian and Egyptian societies figure out prominently in these studies and they generally provide a common frame work for interpretations. The next three chapters will undertake these topics in context with the Harappan Civilizations; here we are concerned with a bird-eye view of other comparable civilizations.

Conception of the Supernatural: One of the greatest obstacles to understanding the religions of early civilizations has been a tendency to impose on them beliefs associated with later transcendental religions. Christianity, Judaism, and Islam all assume the existence of a single, allpowerful, universal, and moral God who does not depend in any way on his creation but upon whom the entire universe depends for its being and preservation. It is often accepted that the religious beliefs of early civilizations were similar to those of later transcendental religions except that the idea of a single deity had not yet been developed. Instead, early civilizations postulated the existence of multiple gods who often acted at cross-purposes to one other. Classical Hinduism is often portrayed as a reflection of this imagery. On the basis of the work of Edward B. Tylor (2), it used to be assumed that still earlier there had been an animistic stage when the universe was believed to be pervaded by a supernatural power that did not yet manifest itself in the form of specific deities.

Trigger has, however, shown that the religious concepts of early civilizations differed far more radically from those of later transcendental religions than nineteenth-century anthropologists assumed. Like band and tribal societies, early civilizations do not appear to have distinguished between what we perceive as the natural, supernatural, and social realms. It was in beginning of the first millennium B.C., that the Greeks, the Hebrews, the Zoroastrian Persians, and various Hindu and Chinese philosophers differentiated the natural world, made up of plants, animals, and inanimate objects, which possessed only limited or no consciousness, the *soul*; the social world of humans, whose behavior was guided by goals, reason, and moral considerations; and the supernatural world of gods, who for the first time were seen as existing apart from and independently of the natural and social realms.

Supernatural beings possessed intelligence and emotions, but they were less subject than humans to the constraints of the material world, which they had created. In Greece, a small number of

materialistic philosophers effectively denied the existence or at least the relevance of the supernatural, leaving only the social and natural realms as matters of human concern. This did not, however, prove to be a popular view. The greatest and most lasting discovery of the later preindustrial societies of Eurasia was that the behavior observed in the natural world was fundamentally different from that encountered in the social realm and that, because of this, relations with plants, animals, and inanimate objects had to be very different from those with human beings (1).

As stated earlier, the refusal of people in early civilizations to distinguish the social, natural, and supernatural realms has tended to be interpreted as the manifestation of a 'primitive' or 'prelogical' stage of intellectual development. Yet the distinction between this outlook and later ones was clearly ontological rather than epistemological; it had to do not with perception and logic but with the manner in which the universe was assumed to operate. Christopher Hallpike (3) and others have demonstrated that the people who lived in early societies were as fully aware of causality as we are. They understood that water habitually flowed downhill, that specific types of stone could be shaped using particular techniques, and that clay became harder and more waterproof when it was fired. The difference between early views and modern ones was that, when it came to conceptualizing the nature of the universe, early peoples used the understandings that were most familiar to them, those that concerned the way human society worked.

As a result of the pervasiveness of humancentered explanations, it was assumed in early civilizations that there were no instances of the operation of cause and effect that could not be suspended by the gods if humans could only persuade them to do so. Therefore the powerful human-like forces that animated nature could be appealed to when human beings needed supernatural help to cope with insurmountable natural and social dangers. If supernatural powers ensured that water normally ran downhill, people might hope that in times of crisis or special need these same powers might be persuaded to make it flow uphill. Conversely, flint-knappers or potters might request that appropriate supernatural forces ensure that the laws of nature, on which they depended, not be abrogated in the course of their work. The belief that nature was controlled by supernatural forces that were inherent in it was no more detrimental to the recognition and use of concepts of cause and effect than was the medieval belief in miracles. It provided people in early civilizations with reassurance that by addressing the gods they could do something effective to cope with the many natural challenges that their technology and medical knowledge were illequipped or entirely unequipped to handle (1).

The Nature of Deities: In all early civilizations, deities were believed to participate in the control of natural processes and the shaping of social life. Some of these deities were manifestations of what we perceive as natural forces; others represented surviving and often supernaturally empowered aspects of deceased humans. Ancestors were linked by their reproductive powers to the creative forces of the natural world, and it is often difficult to distinguish ancestral deities from spirits or gods associated with the natural realm. Deities differed from one another in the extent of their powers and the aspects of nature they controlled. Some exercised a general cosmic function or controlled (or were) natural phenomena that were of great importance to human beings, such as rainfall, sunlight, or reproductive capacity; others were associated with the functioning of more geographically delimited aspects of the natural world, such as particular rivers, lakes, or hills. Minor deities occurred in large numbers and were regarded as subject to the authority of more powerful ones.

Despite intensive study of the religions of early civilizations and a massive data base, there is little agreement about how deities were conceptualized in early religious thought. As Trigger (1) has

demonstrated, concepts of deity seem to have varied significantly from one early civilization to another. In each early civilization people viewed deities as a series of manifestations of the forces of nature, which, whether or not they assumed human form, were aware of human beings, as people in industrial societies believe the physical universe is not. Deities possessed individual personalities which inclined them to treat human beings well or badly. Yet human beings could never be certain of a particular deity's continuing goodwill, even if that deity were a benevolent one and they had served it assiduously. Dealing with deities was no less problematical and potentially dangerous for humans than dealing with kings and upper-class people was for the lower classes or dealing with the natural environment could be for all human beings.

Although deities regulated (or were) aspects of the cosmos, they also acted as patrons of kingdoms, cities, families, craft associations, and individuals. They were venerated by their clients, who expected them to look after their interests. In general, major cosmic deities were the patrons of territorial or city-states while less powerful forces of nature, or divinized ancestors, were the patrons of smaller social groups. Humans also sought to placate hosts of minor spirits that might inflict illness or bad luck on them, often by seeking help from the more powerful deities who controlled such spirits. The relations between deities, the natural world, and the spirits of human ancestors were complex and expressed in culturally specific ways.

Thorkild Jacobsen (4) estimates that there were three thousand to four thousand deities in the Mesopotamian pantheon; ancient lists record the names of more than two thousand of them, mostly in Sumerian forms. About fifty were major deities, seven of whom possessed the power to determine the fate of all human communities and individuals. Lower in rank were the *igigi* and below them still lesser spirits and demons, some of which caused illness. All these supernatural beings were descended from *An*, the sky god. While the principal deities constituted a well-defined family extending over four or more generations, minor supernaturals were classified in groups according to function and lacked individual genealogies.

Variation in the way in which major deities were conceptualized and named in different citystates provided distinctive patron deities for the hundreds of city-states that existed across central Mexico. Townsend (5) suggests that variations in the names of gods were descriptive titles, that differentiated local aspects of a limited number of deities. It is also possible that numerous originally separate gods were being systematically ordered by identifying them as variants of a smaller number of deities. Scholars have assigned at least eleven deities to the *Tezcatlipoca* complex - four of them clearly different forms of Tezcatlipoca and the others either closely related deities or alternative names for him. Historical evidence suggests that the Aztec had upgraded their once humble patron deity, *Huitzilopochtli*, by identifying him with the *Tezcatlipoca* of the South, who was a deity of major cosmic importance. Gods also tended to be arranged in sets of four, one for each direction, with perhaps a fifth deity for the centre.

The Yoruba revered an elaborate hierarchy of deities who were referred to as *ansa, ebara*, or *imole*. These deities were believed by traditional religious specialists to number between four hundred and seventeen hundred. Their names, interrelations, and gender varied from one place to another. The most senior was the creator god, *Olorun*, who lived in the sky, while the rest either lived exclusively on earth or shifted between earth and sky. A number of deities associated with various aspects of nature, such as particular hills, rivers, trees, the earth, lightning, and diseases, were worshipped in one form or another throughout the Yoruba region. Minor bush spirits that manifested themselves in

trees and ponds tended to be friendly and inclined to help humans, but the forest was also a realm of ghosts, monsters, and demons who sought to harm people. The most powerful deities had already existed prior to the creation of the world, but their natures were defined only later as a result of their achievements in the terrestrial realm. Many deities were created through the fragmentation or division of existing ones, and each new deity was assigned its own taboos, songs, and personality.

In China, Shang kings and nobles focused great attention on reporting to lineage and clan ancestors and petitioning and sacrificing to them at their tombs and at special ancestral shrines and temples. In their pursuit of supernatural support to ensure good weather, abundant harvests, productive hunts, successful journeys, and health and well-being for themselves and their families, Shang rulers approached their principal god, *Shangdi*, through the mediation of their ancestors. While the most remote ancestors were regarded as the most potent intermediaries and the ones whose sphere of operation affected society as a whole, it was recently deceased ancestors who were directly appealed to for intercession. Because of fear that they might be malevolent as well as well-intentioned, they were carefully placated.

The early Chinese worshipped many deities identified with the forces of nature. Trees and groves were locales of popular cults, and earth altars were the foci of community and state agricultural rituals addressed to the deities that ensured the fertility of the soil. They also venerated spirits associated with rivers, lakes, forests, winds, rains, astronomical bodies, and mountains and offered sacrifices to the cardinal directions. Stellar deities, as well as ones associated with the winds and rain, were probably viewed as having their primary locus in the sky, while others, perhaps originally presided over by the god *Huangdi*, were associated with the Yellow Springs, or underworld. Deities such as the Dragon Woman and the Eastern and Western Mothers were yet other objects of cults associated with natural forces. While it has been suggested that only the royal and noble families venerated their ancestors, every extended family may have had an altar to its ancestors and to the soil.

Among the Inca supernatural power was manifested in *wakas*, visible objects animated by deities who communicated with humans through dreams, oracles, and supernatural signs and provided them with life, food, health, fertility, and whatever else they required. The most powerful deities had as wakas the sun, moon, ocean, stars, and meteorological phenomena such as lightning. Most deities were, however, associated with less powerful and more localized wakas - mountains, lakes, springs, caves, rock outcrops, trees, shrines, ancient ruins, and effigies. Field wakas were usually stones that served as boundary markers or field guardians. Living humans who had waka status were referred to as *willka*. In addition, numerous objects called *canapa*, including unusually large or curiously shaped corncobs, were kept and venerated in houses. Such objects are variously referred to as minor domestic deities or talismans. Deities could be persuaded to move into new physical embodiments if their old ones could not be transported to a new location or had been destroyed. From this it is clear that *wakas* were physical manifestations of divine power rather than the essence of such power.

The gods and goddesses of Egypt represent over 50 separate deities, most of which date back to pre-dynastic times. The ancient tribes that made up the region worshiped their own particular gods, which were normally embodied by animals. As Egyptian civilization advanced, the deities took on human characteristics. In many cases, the gods and goddesses were depicted with human bodies, while retaining animal heads. By the beginning of the Old Kingdom Dynasty (3100 BC), a national religion developed out of the primitive tribal and local religions. However, ongoing changes in political power resulted in the changing status of Egyptian deities. Generally, as different cities or regions

became politically dominant, their particular god or goddesses also became dominant.

In all early civilizations it was believed that deities had created the universe and kept it functioning. As the powers which animated and controlled nature, they supplied (or were) the energy or life that permitted the universe, including human beings, to exist and sustain itself. They were regarded as the source of the light, warmth, activity, nourishment, and fertility that humans required to live and reproduce themselves. Since humans depended on the natural world for their survival, they also depended on the gods. Agriculture was not simply the principal source of nourishment and livelihood but also the primary means by which the gods sustained human life. The gods not only fed humans but in some instances were viewed as the food humans ate.

But why did deities sustain human life and at what cost to themselves? The Egyptian 'Instruction Offered to King Merikare', which dates from the First Intermediate Period, suggests that the creator god fashioned the universe for the sake of human beings, that he shone as the sun in the sky for them, and that he provided them with food and leaders who could maintain order amongst them (6). This work, which superficially appears to have anticipated a transcendental, post-axial view of the universe, created the 'solar theology' of the Old Kingdom, which celebrated the creative power of the sun god. Yet, while the statement that human beings were the creator god's 'cattle' may be construed as a metaphorical reference to a transcendental deity's loving care for humans, it may instead indicate the sun god's dependence on humans for his nourishment. Elsewhere it is made clear that the Egyptian creator god brought the universe into existence primarily in order to have a realm in which he and the other gods could exist. The sun's daily trip across the sky not only benefited human beings but also allowed the creator god to remain vigorous by passing through ceaseless cycles of death and regeneration.

In most early civilizations the gods kept the universe functioning primarily to ensure their own survival and well-being. Humans existed in the Mesopotamian universe to provide services - labor and sacrifice - for the gods that significantly improved the quality of their lives. In Mesoamerica, where the concept of religious sacrifice was elaborated to an exceptional degree, it was believed that the gods periodically sacrificed their own or each other's lives to ensure the continuity of the universe and facilitate the survival of humanity. The Aztec claimed that the Fifth Sun had been enabled to move across the sky by the gods' casting themselves into a cosmic fire and that, still earlier, by splitting the female Earth Monster into two parts to form the earth and sky, the gods had made it possible for her to bring forth all the life on earth. The Aztec believed that plants and animals nourished mainly because the gods sacrificed their own lives to support them. Each autumn the sun god died and descended into the underworld to marry the Earth Goddess, who gave birth the following spring to the maize god - the sun reborn in a different aspect. Human sacrifices were interpreted not simply as offerings to the sun but as embodiments of divine power, representing the gods' sacrificing themselves to renew the world. The Maya likewise believed that their deities sacrificed themselves so that the world might be renewed and human beings live. Humans were made from maize, which was the flesh of the gods and contained divine soul power or life-force that was sacrificed for humans' benefit at harvest time. This power passed from maize into human bodies, where it became particularly concentrated in human blood. Thus humans depended on the gods for their survival.

The Pyramid Texts suggest that the Egyptian sun god nourished and empowered himself each morning by slaughtering and consuming the multitude of stars, thereby appropriating their power. As he crossed the sky, creating and sustaining terrestrial life with his energy, he grew older and weaker,

and his remaining power was dispersed again each evening. In Egypt and Mesopotamia myths also associated the death and rebirth of the gods with the agricultural cycle. Inanna's essential role in ensuring the agricultural fertility of the earth required that, when she was executed by her sister, the god Enki had to send spirits to the underworld to revive her and secure her release in return for the confinement of various other agricultural deities in the underworld for several months of each year. The Egyptians believed that crops sprouted from the body of Geb or Osiris when it was moistened by the Nile flood, which represented the god's own power of fertility.The murder of Osiris by his brother Seth was represented as part of an ongoing struggle between cosmic order and disorder, while the annual cycle of Nile floods and crop growth constituted the cycle by which Osiris renewed himself. Whether the gods were represented as deliberately sacrificing themselves or not, their cycles of life, death, and rebirth sustained the universe upon which, ultimately, all humans depended.

In all the early civilizations human beings offered nourishment to the gods in the form of sacrifices. Sacrifices took the form of killing animals or human beings, offering meat, vegetables, and alcoholic or nonalcoholic beverages, and presenting inedible materials believed to contain special supernatural powers. The Inca offered lumps of gold and silver or images made from these metals to the gods, and the Egyptians offered unworked metals and semiprecious stones, all these substances being considered especially rich in cosmic energy. The Inca offered thorny oyster shells from the Pacific Ocean, whole or powdered, to springs and rivers in the highlands. The Maya believed that burning incense, made from tree resin, provided deities with an especially potent form of divine energy. The Inca burned large amounts of fancy cloth as offerings, thus releasing for the gods the energy that had gone into making it. Worshippers in Mesopotamia and elsewhere donated goods to temples as thanks offerings to gods, but it is not clear whether they were also viewed as sacrifices that would have helped to sustain and empower the gods.

Sacrifices were made to the gods by individuals or groups. Some were made at regular intervals (daily, weekly, or yearly), others on special occasions to expiate sins, thank the gods, or celebrate life-cycle events. In general, the upper classes made more lavish offerings and sometimes sacrificed to more important deities than the lower classes. While Aztec commoners offered quails, tortillas, green and maize to the gods, nobles and rich merchants offered human captives, cacao beans, exotic bird feathers, and jade. Sacrifices offered by the king on behalf of the whole nation were the most costly and elaborate of all. While, especially in Mesoamerica, human sacrifice was represented as an honor for the victim, upper-class adults rarely if ever freely volunteered themselves. Human victims were mostly prisoners of war, criminals, strangers, and children.

Offerings were essential features of daily Egyptian temple and mortuary cults. The Egyptians believed that gods entered or were drawn into their cult images three times each day to consume the supernatural energy from their food offerings. In the morning these images were also washed and dressed by their priests. These rituals, performed in the most secluded part of the temple, were essential for maintaining the cosmic order. Food was regarded as possessing magical power as well as creative energy which made it the essence of life or being. Evidence suggests that human sacrifice was performed in cultic settings in Early Dynastic times, but in later periods the only manifestation of it may have been the infrequent slaying of enemy leaders as apparent offerings to the gods. Statues of bound enemies or written lists of such people appear to have served as substitutes for living individuals in the execration rituals that were performed during the Middle Kingdom to drain the king's enemies of power.
cause of this, the gods forgave Enki for having surreptitiously rescued a few humans who could

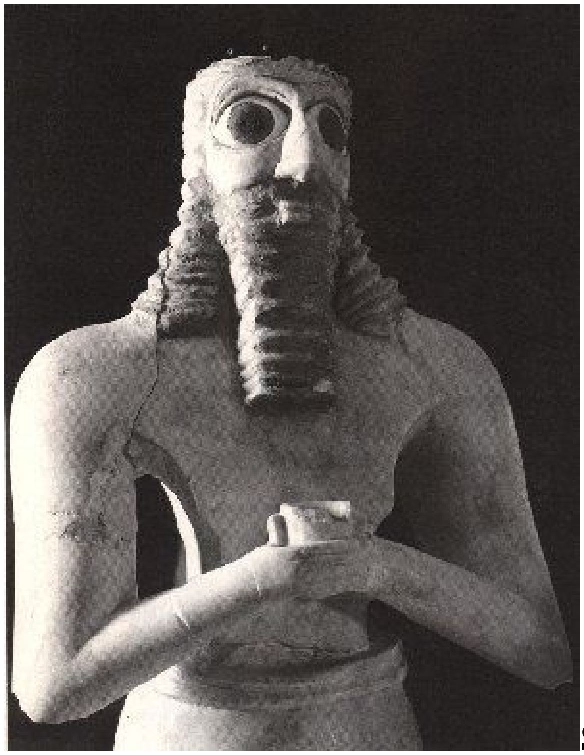
continue to serve them. A later, perhaps facetious Mesopotamian text suggested that, if sacrifices were withheld from a neglectful personal deity, that deity could be forced to beg for food as a hungry dog does from its master.

The food and drink that were offered to Mesopotamian gods resembled what was consumed by humans. As in Egypt, animals were slaughtered on temple premises, but there is no indication that the killing of the animal, as opposed to the offering of meat, was regarded as sacrifice. Some animal sacrifices were burned. There is no evidence of human sacrifice, except perhaps the killing of lower-class individuals temporarily substituting for a monarch who feared that the gods might be seeking to destroy him. In serving the gods, priests acted as their household servants, the king as their chief steward, and commoners as their estate workers. The Mesopotamians appear to have believed that the gods collectively could survive without human assistance and had done so prior to the creation of humanity. That, however, would have required them to grow and prepare their own food, which meant that their standard of living and position in the cosmos would have been considerably lower than it was after the creation of humanity. The spirits of dead humans received sacrifices, usually together with the deities that were worshipped by individual households.

The Inca regarded sacrifice as the principal focus of religion. Its function was to nourish the gods. Smoke rising from burnt offerings sustained the sun god and gave him the strength to stay young and continue moving. Religious sacrifices ensured the continuing circulation of life-giving supernatural energy through the universe. The Inca sacrificed male llamas, guinea pigs, birds, and animal fat but not dogs to their deities. They also offered them cooked vegetables, fermented drinks, cocoa, cloth, and metal. The gods preferred food and alcoholic beverages made from

Mesopotamians believed that all human maize. Libations, sometimes further empowered beings were the servants of the gods. It was their duty to grow food, weave clothes, build earthly residences, cook, and clean for their deities. Gods needed food in order to function effectively, and this was provided by their temple staff in the form of two meals each day. Without these offerings, the gods would have grown malnourished and ceased to function effectively. The legend of the flood recounted that, after water covered the earth, offerings ceased and the gods grew hungry and began to repent their destruction of humanity. When the water receded and the one surviving family, led by Utnapishtim, emerged from its boat and offered a burnt sacrifice, the deities crowded 'like flies' around the rising smoke, which transmit ted to them for the first time in many days the spiritual power of food produced by humans. Be by being mixed with powdered seashells, were poured into basins, holes in the ground, and springs. Other offerings were burned. In Cuzco, three or four llamas were offered to the sun each day; their throats were cut in the square in front of the Qorikancha and their bodies burned on an open altar in the square. Human sacrifices were offered to the gods during public crises such as famines, pestilence, military defeats, or the illness of the king. The blood of animal sacrifices nourished the

gods and was daubed on the faces of worshippers, young men being initiated into adult status, sacred and royal statues, buildings, and mummies in order to strengthen them. Only the mummies and statues of Inca rulers and the images of gods were daubed with human blood. Sacrifices were also made to dead ancestors to


Sumerian god Anu

nourish them so that they could better sustain their living descendants.

The Shang and Western Zhou Chinese offered sacrifices to sustain nature deities and the souls of their dead ancestors. Deities depended on these offerings to maintain their strength, and powerful deities required more sacrifices than minor ones. Provisioning lavish sacrifices was one of the main occupations of the upper classes and a primary justification for both warfare and hunting. The offerings made to Shang royal ancestors and to nature deities consisted of grains, millet, ale libations, animals, and human beings· Animals that were routinely sacrificed included dogs, pigs, wild boars, sheep, and cattle; birds and horses were less common. The humans appear to have been mainly prisoners of war, with the Qiang, a western herding people, being favored victims. The burial of whole army units, including chariot crews, during foundation rituals for the palaces built at Anyang appears to have involved the sacrifice of royal retainers·

The Maya believed that the gods depended on human beings to care for and nurture them and renew their powers. The Maya's principal cosmic task was to keep the supernatural realm working by nourishing the gods. This was construed as part of a contractual obligation between human beings and the gods in which each side provided the other with the divine power that they required to survive. Throughout Mesoamerica, sacrifice was regarded as a form of debt repayment, with humans returning to the gods the cosmic energy that the gods

had expended to provide them with food, make them fertile, and enable humanity to endure.

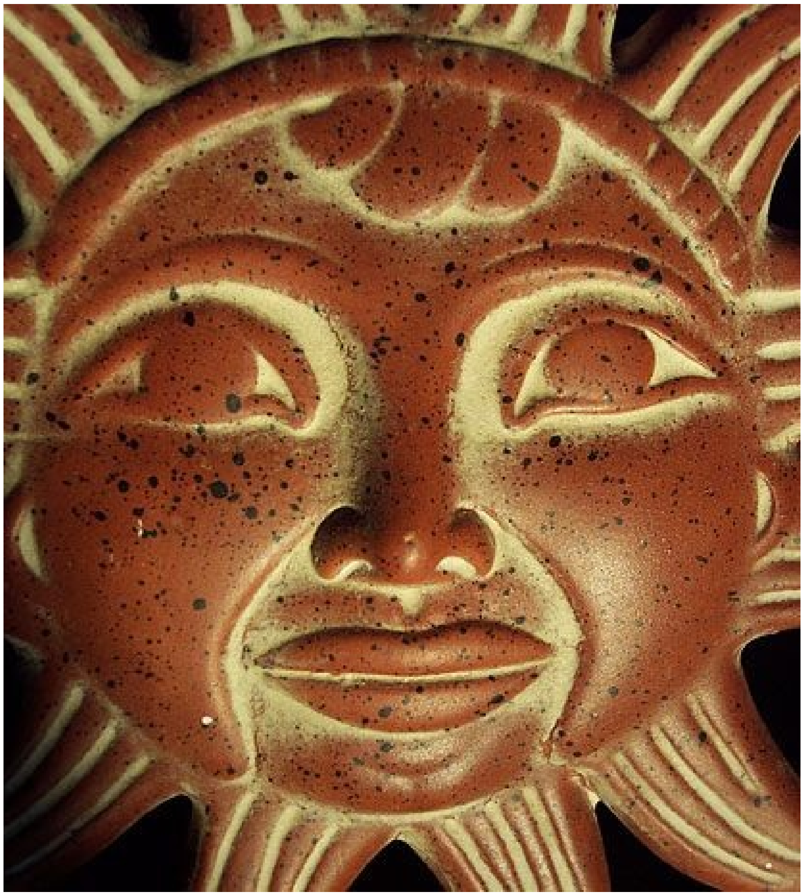
The Aztec and other peoples in the Valley of Mexico believed that their gods were starved for lifegiving forces and required constant sacrifices to revive them and sustain the cosmic order. Sacrifice was the means by which human beings could return to the gods the energy that these deities

had expended to keep the world and individual humans functioning. If this did not occur, the earth would become infertile, the power of the sun would fail, the cosmos would disintegrate, and supernatural forces of disorder, terror, and destruction would be unleashed against humanity. The Aztec made offerings of cooked food and objects made of precious substances, but it was human blood and flesh that best nourished and animated the gods·

In all the early civilizations gods supplied human physical needs, but farmers ultimately provided the food, services, and human lives that were essential for the well-being or even the survival of the gods. Thus they played the same role in relation to the gods as they did in relation to upper-class humans; they supplied food and labor in return for order. The labour of the lower classes ensured the well-being not only of the upper classes but also of individual deities and the universe. This belief differed radically from that of modern transcendental religions, whose deities require no human support. It also differed from the religious beliefs of early small-scale societies, which perceived humans as depending far more on the supernatural forces that animated nature than those forces depended on human beings.

Ritual Intermediaries: In all early civilizations kings and members of the upper classes claimed a special role as mediators between the terrestrial realm and the gods. It was through their intervention that the energy on which the gods, and hence the universe and all human beings, depended for their survival was channelled from the human realm back into the supernatural one. Ordinary people had contact with the supernatural through household and local cults, prayer, divination, visions, dreams, and spirit possession. Many minor deities concerned with various aspects of human well-being were accessible to everyone. Individual families, craft associations, landowning groups, and villages had their protective deities or ancestor spirits. All these groups offered sacrifices to tutelary spirits, and these sacrifices made these groups minor energy-recycling units mediating between the human and the supernatural world. Kings, highranking officials, and major institutions tended to monopolize communication with the more powerful supernatural forces because their wealth and power enabled them to make more lavish offerings. The ability to maintain contact with the gods was the most important source of political authority. As a later Chinese tale put it, in former times first shamans and then everyone could communicate with the spirit world, but eventually only rulers could do so.

In Egypt kings had established, at least by the Middle Kingdom and possibly much earlier, that only they could sponsor the sacrifices that nourished the creator gods and related deities in temples throughout Egypt. This claim was based



Mayan gods played a significant role in the life and culture of this

ancient civilization. The

Mayan sun-god was particularly important in these ancient people

on the belief that the king was the earthly manifestation of each creator deity; the king's offering sacrifices to the gods was equated with sons' making offerings to their deceased fathers.

Mesopotamian kings were responsible for ensuring that offerings were regularly made to their city's patron deity and, more generally, to any god or goddess who had a temple in the citystate. Economic prosperity and social harmony constituted evidence that a king enjoyed the favor of his city's principal deities. Some rulers had been priests before they became kings, but in any case they served as religious leaders. They could personally make offerings on behalf of their citystate and its people to any god and were responsible for overseeing the construction and repair of temples and ensuring that temple estates were managed properly. Kings also presented gifts of land, captives, and valuable ornaments to temples and frequently implied that they sought to accumulate riches to adorn temples rather than for their own glorification. Mesopotamian kings played key roles in certain religious rites, such as the New Year festival and the purification of armies before battles. The staff of each temple offered sacrifices to its deity or deities every day. Yet, despite competition between palace and temples, a king's ultimate responsibility for ensuring that a city's gods were well served and his ultimate dependence on their favor set him apart from and above other men.

The Yoruba king had special relations with the patron deity or deities of his royal lineage, whose shrines were located close to or within the outer compound of the royal palace. He also exercised ultimate authority over every cult performed within his kingdom and had the final say in all religious matters. The king authorized community festivals and was represented by a priest, relative, or palace

official at all public sacrificial rites. His sacrifices and the annual festivals he sanctioned assured the stability and good fortune of his kingdom· Richard Bradbury's (9) description of the king of Benin as a living vehicle for the mystical forces that ensured the vitality of his kingdom applies equally to Yoruba rulers. Kings personally compounded secret 'medicines' that promoted the collective welfare of their subjects. As did the gods, they accepted sacrifices that were offered to them by individuals and groups so that the gift of life might be given to these people in return.

In the Valley of Mexico, kings were endowed with divine power which made them the spiritual leaders of their nations. They were expected to watch the earth and sky for supernatural signs, offer appropriate sacrifices, visit shrines, and ensure that priests performed their duties properly. At the same time, rejuvenating the gods and sustaining the cosmic order were activities that upper-class males and ennobled warriors regarded as their collective prerogative. Lords wore or sponsored the wearing of the attire of deities at festivals. These costumes drew the deities into closer contact with humans and helped humans to forge more intimate and beneficial relations with them.

The Inca ruler and his queen were the supreme mediators between their people and the supernatural forces of the sky and the lower world. The Inca king maintained the cosmic order. He could replace any priest as the chief worshipper or oracle medium of a god. State sacrifices were offered to all deities in the name of the king, except those to the creator god, which were made on behalf of other deities and possibly paid for by those gods' foundations.

The Chinese nobility was set apart from the general population by the key role it played in sacrificial rites. The nobles' wealth and privileged access to the rewards of warfare and hunting enabled them to conduct more elaborate rituals than commoners. Their authority was manifested and reinforced by their ability to nourish and sustain in a spectacular manner the souls of their ancestors and the nature gods who fed them and their followers. Only altars of the soil that were patronized by rulers were nourished by the blood of military captives and condemned criminals. The connection between political power and religious ritual was strengthened by the Chinese belief that ancestral souls would accept sacrifices only from their most senior direct living male descendant. This meant that higher-ranking nobles had access to more ancient and therefore more powerful souls. Only the king, through the mediation of his royal ancestors, could communicate with the supreme sky god.

The Maya believed that their kings played a crucial role as both sacrificers and victims in nourishing the gods, thus ensuring that the earth would remain fruitful and the cosmos would survive. Rulers mediated between the different levels of the cosmos and drew deities and divine power into the human world. They communicated by means of elaborate rituals with the gods and the souls of the dead. Their blood sacrifices reenacted the creation of the gods and of the world order and strengthened both. Waging war provided royal and noble victims for sacrificial rituals, and this, combined with the personal bloodletting practiced by rulers and nobles, gave the upper classes an especially important role in nourishing the gods and sustaining the cosmic order. Both rulers and gods sacrificed themselves so that life could continue.

In all the early civilizations, the gods and kings, assisted by the upper classes, played similar managerial roles in relation to the cosmos and society respectively. Commoners seem to have tacitly acknowledged that, without the domestic peace and order and the defense against foreign attack that the state provided, everyday life would have been far worse for them. Taxes and labour were the material compensation that commoners paid to the upper classes for these benefits. It was there for

easy for people in these civilizations to imagine all human beings performing the same role in relation to the gods that farmers and laborers performed for the upper classes. Sacrifice was the equivalent of paying taxes or tribute to the supernatural. Just as the upper classes could not possess the power they did without the surplus food turned over to them as taxes, so the gods could not survive without sacrifices. It was by the king that offerings were transmitted to provision the major gods so that they could continue to sustain the universe.

Individual rulers were manifestly inferior in power to the major gods. They lived no longer than other humans, even if the office they held was regarded as immortal, yet they were pivotal for maintaining the cosmic order. They alone could discern the will of the gods and ensure that the gods' needs were supplied. Kings thus performed dual functions as guarantors of a hierarchical society and sustainers of the supernatural order on which both nature and society depended. Because kings mediated between the human world and the gods, they and their office partook to varying degrees of the attributes of both worlds. Yet farmers and manual laborers were also recognized as playing a vital role in feeding the gods and therefore in maintaining the universe. Rulers and deities depended for their survival and well-being on the labour of farmers no less than farmers depended for an ordered, habitable, and fruitful universe on the upper classes and the gods. The three groups were linked by a pragmatic interdependence.

Religion and Social Life: People living in early civilizations acted on the world technologically as far as they were able, but their technology, most crucially their agricultural and transport technology, was rudimentary, and they remained heavily dependent on the vagaries of the natural environment. When their technology was insufficient, they sought to control natural phenomena in the same way they tried to influence the behavior of powerful human beings. In doing this, they applied to the natural realm what appears to have been humanity's oldest and most highly developed skill: understanding of social behavior. It was, however, a skill that could appear effective only to people who believed that nature was controlled by forces that behaved more or less as humans did. People sought to make nature conform to their purposes as they would have done other people: by persuasion, magic, and spells. What they did not perceive was that the nonhuman world, both animate and inanimate, operated on fundamentally different principles. Major insights into this distinction were not achieved until the first millennium B.C. The religious beliefs of early civilizations were therefore products of a different set of analytical categories from those that scientists in modern societies use. They were not the results of a defective or 'primitive' intelligence or of an inability to understand causal relations. The principal difference between the religious beliefs of early civilizations and those of still earlier, more egalitarian societies was that the various forces controlling nature had come to be viewed as more unequal in power and more hierarchized as human society itself had acquired these characteristics.

Yet it was not believed that nature totally resembled states. In Mesopotamian society, at least by the Old Babylonian period, supernatural forces had sworn obedience to a single divine leader. In other early civilizations either there was no single supreme deity or such a deity was not concerned with dominating the others. This reflected a perception of the cosmos as composed of forces that, while unequal, were not arranged in a single, all-embracing hierarchy. The views of the cosmos that prevailed in early civilizations call into question the suggestion that early civilizations were the first societies in human history to insulate themselves from the natural world. Because the divine was seen as manifesting itself in the natural world, people sought not to be separated from nature but rather to establish good relations with the supernatural powers inherent in nature that could help to ensure their

well-being. Under these circumstances, a desire to be insulated from the natural world was inconceivable. People living in early civilizations not only felt less cut off from nature by a massive intervening technology than we do but actively sought to insert themselves, as individuals and societies, into the natural order which they believed was simultaneously a supernatural one.

As society expanded and kinship declined in importance as a factor unifying social life, religion replaced kinship as a source of concepts for analyzing and discussing the social order. Myths concerning a supernaturally animated cosmos permitted a detailed analysis of ideas and strategies that could be used to promote, sustain, and change the sociocultural order as well as to criticize specific policies. Such religious understandings supported the political claims of the upper classes by identifying them with the organic powers of reproduction and the hierarchies that were believed to be inherent in a cosmic order that was simultaneously natural and divine. Having interpreted nature in terms of familiar social categories, the leaders of early civilizations used the understanding they derived from this operation to justify the unequal social order they had created.

This general analytical framework was shared by all societies that understood the cosmos using the same concepts they employed to analyze social relations. The main difference between more egalitarian societies and early civilizations was the differing understanding of society that was brought to the analysis. In egalitarian societies, people saw themselves relating to other human beings and to spirits as individuals who for various personal reasons possessed differing degrees and sorts of power.

Andean peoples feared supernatural punishment for personal misconduct. In Mesopotamia, people feared divine punishment if they disobeyed a god's wishes or violated his prohibitions, even inadvertently; in retaliation gods might instruct the demons of illness and misfortune or dissatisfied souls of the dead to pursue and punish wrongdoers (10). By the second millennium B.C. there was a growing emphasis on personal deities, both male and female, who could protect individuals from such dangers by interceding for them with the high gods. Personal deities were often passed down from father to son. Individuals petitioned these deities to identify what wrong doings they should repent, accept their atonement, supply them with the good luck needed to succeed in life, and protect them from demons. Unusually bad behavior could cause a personal deity to desert the person being protected. In Egypt there was a gradually increasing tendency to appeal for help to major deities in times of personal trouble. It was assumed that some deity had inflicted misfortune on a person in retribution for misbehavior and that winning the forgiveness and support of a powerful deity constituted the best hope of redemption. The Yoruba feared misfortune as a consequence of perjury, mistreating others, or neglecting a god or ancestor. To punish such behavior the gods might inflict bad luck or even shorten a person's life. Propitiatory sacrifices were necessary to atone for misdeeds. Aztec, when threatened by personal misfortune, sought the protection of their tutelary deity (13).

While conducive to moral behavior, fear of divine punishment also encouraged a search for charms, incantations, and rituals that would prevent individual misconduct from being noticed and punished by the gods. These were the same means by which the assaults of malicious spirits might be deflected. Individual humans sought to acquire supernatural power that would protect them from the different forms of supernatural attack being directed against them either as a result of malice or in the form of just punishment.

Priests: To possess the detailed esoteric knowledge necessary to perform the religious rituals that

were patronized by the upper classes in early civilizations required considerable training. In many instances such knowledge, including rituals, prayers, hymns, incantations, and divination formulae, was the prerogative of priests, who were expected to manage the technical details of human relations with the supernatural. In early civilizations or still earlier smaller-scale societies, a shaman or sorcerer might learn how to relate to the supernatural from ecstatic experiences or by seeking personal instruction from an experienced master of these arts.

Each city-state in the Valley of Mexico had its own religious institutions, and every major deity possessed its own temple or temples. All the larger temples had their own priests, who lived in special residences adjacent to the temple while they were on duty. The king was the spiritual leader of his city-state and the symbolic head of its priesthood, and he presided in person over many major rituals. In Tenochtitlan, the two highest-ranking clergy were the high priests of the main gods. Appointed by the king and his council, they appear not only to have been in charge of the cults of these two deities but also to have exercised some kind of supervisory control over all public cults and priests in the city-state. Yoruba religious practices were less centralized than were those of the Valley of Mexico or Mesopotamia. Instead of being focused on temples and controlled by hierarchical organizations of priests, they were associated with a large number of cults dedicated to the worship of particular deities or sets of deities. Individuals joined one or more cults as a result of family affiliation, unusual experiences, special physical characteristics, or personal preferences. While the Maya had priests in the sixteenth century *A.D.*, no evidence of priests has been found in either Maya art or surviving texts for the Classic period. Only kings and members of the royal family are depicted presenting offerings to deities. This may have been, as it was in Egypt, an iconographic convention stressing the crucial role claimed by the king in communicating with the gods and making offerings to them. In Egypt all cults for both the gods and the dead were performed in the king's name. Kings supplied cult statues to provincial temples and may have arranged for provincial government officials to finance the daily operations of these temples. Yet, prior to the Middle Kingdom, the construction of most provincial temples appears to have been initiated and carried out locally. Each temple seems to have had its own administrators, workmen, and priests. In the Central Andean highlands, ayllu or village leaders appointed elderly men and women to act as part-time priests. Their responsibilities included offering sacrifices to the ayllu's wakas and the souls of its dead ancestors and being the oracles through whom these supernatural beings spoke to humans. Throughout the Inka kingdom, the government appointed priests and chosen women to serve in state temples. There is no clear evidence of a professional priesthood in Shang or Zhou China. Kings, lords, and lineage heads sacrificed to the gods and to their ancestors, assisted by their wives, mothers, sisters, and retainers.in In Mesopotamia, there was from time to time in some citystates considerable rivalry between kings and the managers of major temple estates. At other times and places, Mesopotamian kings controlled the operation of temples. In all situations, however, Mesopotamian kings were recognized as the chief stewards and agents of their cities' patron deities.

In none of these societies does there appear to have been an overall religious hierarchy paralleling or overreaching the political order. Even in individual city-states, a single high priest rarely regulated all the temples, and in territorial states it was considered unnecessary to impose a rigidly hierarchical religious organization on local cults. The staff of large temples or cults tended to be complexly and hierarchically arranged. Their priests wore elaborate costumes, observed numerous taboos, and specialized in various branches of knowledge related to communicating with and serving the gods. Yet in every case kings claimed to be the chief intermediaries between their people and the supernatural powers that animated and sustained the universe. This role did not inevitably confer

divinity or even great political power on kings, but it made them symbols of the unity of the state and responsible for sustaining the cosmic order. Priests, if they existed at all in particular early civilizations, were subordinates rather than rivals of the king.

Public Ritual: In most early religions, large numbers of people were, however, expected or required to participate in other public rituals. These rituals sought to tap the fertility, power, and creativity of supernatural forces for the benefit of the social realm by making that realm more closely resemble its supernatural prototype. They also sought to sustain, renew, and stabilize the cosmos for the benefit of humanity, to draw society into closer harmony with the natural environment, and to reinforce respect for the political hierarchy by stressing its resemblance to the supernatural realm. These goals were pursued by performing rituals that were believed to duplicate what went on among the gods or had happened on earth long ago. In addition to reinforcing cosmological beliefs and promoting social integration, these public rituals sometimes provided a stage for acting out and partially resolving political tensions that were not publicly acknowledged.

In the Valley of Mexico, the entire population of city-states joined in numerous acts of collective worship. All the residents of cities were expected to attend their religious festivals. All teenage boys and girls were taught how to participate in these rituals. Public rituals involving large numbers of celebrants drawn from all classes were performed at various times of the year in plazas adjacent to the central temples of each city, as well as at temples and shrines elsewhere in the city and in the surrounding countryside.

Yoruba worship tended to occur in public. Shrines were usually small, compelling all but the most esoteric rituals to be carried out around rather than inside them. The king performed special rituals for the welfare of the kingdom in secluded parts of the palace, but even religious societies with secret memberships conducted masked rituals in the streets. In the course of its major festivals, each Yoruba urban centre sought to re-create the world from its own point of view and to reestablish a precarious balance between the political unity of the state and the diversity of its constituent groups.

In Mesopotamia, an important form of public ritual was the journeying of cult statues from one temple to another. Sometimes the images of deities were transported from their temples to the surrounding countryside. This became a major feature of a later festival at Babylon. Cult statues from different city-states also visited one another. Pre-Sargonic texts record such journeys between Lagash and Girsu and as far away as Uruk, while later records tell of visits by deities from southern Mesopotamia to Nippur and Eridu. The images of deities were also paraded around cities during their festivals. Standards or symbols of deities were regularly taken from temples to assist in collecting tithes and to be used for swearing oaths in legal cases. These festivals were the occasions for the public to feast on food provided by the king and temples, and in the third millennium B.C. it was also a time when the fertility of the land was renewed by a ritual marriage between the king, temporarily incarnating a god, and his wife or some priestess, incarnating a goddess.

The Inca rulers celebrated an elaborate cycle of religious rites that corresponded with the solar year. These rituals were primarily concerned with the planting, harvesting, and storage of crops and with promoting the welfare of the king and the Inca nobility. They celebrated both the king's military prowess and his control over the reproductive resources of society. Singing and dancing were important features of Inca public worship. Large quantities of beer were consumed by celebrants. Coca leaves were chewed on these occasions by nobles and used for divining and in sacrificial rites.

State rituals had set programs, including special dances and songs, and different social classes were assigned specific roles. Agricultural and other state rituals were also performed in and around the main temples in provincial administrative centers. There is archaeological evidence that lavish hospitality was offered at these centers to celebrants from the surrounding province.

In Egypt public and semipublic rituals sustained the monarch, the seasonal cycles, and the gods themselves. The cult statues participated in religious festivals that required them to leave their temples. They often visited one another, sometimes travelling from one provincial town to another as Hathor of Dendera and Horus of Edfu did each year to celebrate a ritual marriage. Other deities travelled from one temple to another within a single district. Some celebrations, such as the Festival of the Opening of the Year, were observed annually in every temple. In the Middle Kingdom the festival of Pokar, which commemorated the death and revival of the god Osiris, attracted pilgrims from all over Egypt to Abydos. Temples throughout Egypt held annual festivals to which people came from considerable distances to honor local deities. The most important of these festivals were subsidized by the king and supervised by royal officials acting in his name.

The Shang religious rituals that we know most about were those related to the royal ancestor cult. These rites were performed privately in a restricted palace setting. Among the public rituals was that of Ji (royal tillage). Each February, at the beginning of the farming season, the king and certain highranking officials observed a five-day fast and then cultivated a sacred field and offered sacrifices for a good harvest to the god Shangdi. Food and drink were served to the officials and farmers who participated in this ritual. In the autumn, the king offered the food grown on this field as a thanksgiving sacrifice for the harvest. This festival also recognized the farmers' toil, which made the production of food possible. Nobles may have performed similar planting and harvest rites in honor of lesser deities at their regional and local centers. The sacrifices that kings and nobles offered at earth altars in connection with war and agriculture also appear to have been public rituals.

In all early civilizations state religious rituals such as enthronements, royal funerals, and offerings to the gods had public as well as esoteric aspects. The esoteric elements stressed the special and restricted nature of the upper classes' relations with the gods. The public rituals displayed the wealth, power, and privileges of the upper classes, who controlled these events, but they required the participation of ordinary people to align human activities with the cosmic and divine orders. Public rituals strengthened the cosmos and drew energy from it for the benefit of humans. They reenacted the creation of the universe and reinforced the harmony between the annual cycles of human society and those of the natural/supernatural world. The social order was justified by proclaiming it to be modeled on the natural world and the supernatural forces that animated it.

Life after Death: In almost all early civilizations, fate of individuals after death reflected the roles that different classes played in society; the lower-class people are expected to have a humbler and more pessimistic future wheres the upper classes advanced the most extravagant claims concerning their own superiority even after death. Such assertions tended to be made in territorial states and in city-state systems where nobles were distinguished as a hereditary group from commoners. There are, however, exceptions. In simpler societies, the lower classes had more positive self-image that equalled the rich and the powerful.

The Yoruba believed that the human body was animated by multiple souls or life-forces. At the time of a person's death, these souls left the body. If the person had died prematurely, they might continue

living in a ghostly form in some other community until their allotted life span was used up. Sooner or later, however, all souls travelled to the spirit world, which was generally believed to be located in the sky. The dead were buried in the ground. Men who lived in towns were interred beneath the rooms or courtyards of their residential compounds. Country dwellers were brought for burial to their patrilineages' urban compounds, while women were interred within their fathers' residences. People without descendants were buried simply, while those who had children were interred with elaborate rites and venerated as long as their children lived. Lepers, albinos, hunchbacks, pregnant women, and people killed by lightning were buried in the sacred groves of various deities by priests who ensured that these individuals were reconciled after death with the deity who was responsible for their misfortune.

Elaborate burial rites ensured that the souls of the dead reached the supernatural world and did not become wandering ghosts. Animal sacrifices, the blood of which was sprinkled on the corpse, strengthened the souls of the dead and ensured that they were well disposed towards the living. After the burial, offerings continued to be made to the body in the form of blood and other libations, which were poured down a hole into the grave. The bodies of the dead were also believed to share in the first-fruits offerings that were made to the earth god. The body apparently ceased to have a personal existence after death but was identified with the life-giving powers of the earth. The chief aim of an ancestral soul living in the sky was to be reborn, preferably back into its patrilineal extended family as a grandchild of its previous incarnation. It could be reborn as the same or the opposite sex in successive lifetimes.The former identity of the soul of a newborn child was revealed to his or her kinsmen by the child's physical appearance and behavior or through dreams and divination.

In some of the Mesopotamian myths, human beings were conceived as clay infused with an element of divinity, often the soul *(etemmu)* of a slain god. After death, it was believed, the corpse *(salamtu)* dissolved back into clay. The bones *(esemtu)* remained forever asleep but were often taken along when families moved from one place to another, and the soul (etemmu) survived as a phantom, ghost, or shadow. If, by mischance, a body remained unburied and no proper funeral rites were performed, its soul wandered the earth as a malevolent spirit. Most souls descended into the underworld *(eretsu)* by way of the grave or various openings *(ablal)* and then had to cross a dangerous river. Once there, they lived a cheerless existence in a dark, arid, dusty realm. This was the home of the gods of death, under the command of Erishkegal and her husband N ergal, and of the demons of disease and misfortune. The sun passed through the underworld each night, briefly lighting portions of it; the moon remained for one day each month. Because nothing could be grown there, the souls of the dead were deemed useless to the gods except for assisting the deities of the underworld to harass the living. Escape was impossible, although on rare occasions the soul of a dead person or god might be released in return for the soul of a living one.

Offerings were made to the souls of dead family members at each new moon. These souls were petitioned to intercede for the welfare of their descendants before the council of the Annunaki, the gods who decided the fate of humans. Yet they could not grow their own food or produce their own clothing in the underworld, nor were these necessities provided for them by the deities of that realm. They depended on food offerings from their living descendants if they were not to starve.

The dead were sociallyranked in the underworld as they had been in life. Kings lived in gloomy palaces built of lapis lazuli. They received larger food offerings than commoners, and in Early Dynastic times some were accompanied by the souls of slain household servants. They took riches

with them into the underworld so that they might bribe the gods of death into treating them better. Even so, their lives were wretched. Conditions were worse for the souls of ordinary people, especially those who were no longer supplied with offerings by their descendants.

Mesopotamians believed that the dead maintained their personal identities, at least as long as their souls were fed. The gods of the underworld were said to 'judge' the souls of the dead, but that seems to have involved confirming their rank rather than rendering a moral evaluation; there was no reward or punishment for what they had done while alive. While the deities of the underworld were supposed to have prayed for the welfare of the souls of the dead, these souls endured an etiolated, marginal existence in a realm that was physically little different from the grave. Many, willingly or unwillingly, helped to harass and injure the living. Living people attributed some of their misfortunes to the souls of the dead, especially ones whose bodies had been left unburied or who did not receive offerings. Such souls might attack strangers or their own kin. Yet appropriate exorcisms could return the most malevolent souls to the underworld.

Among the Aztec, after death the animating forces left the body and went their own ways. The soul returned to Ometeoti, perhaps later to be infused into a child born to the family of the deceased. The unaugmented sentient soul, which preserved the personality of the dead person, experienced a variety of fates determined not by a person's social status or behavior in life but by the nature of his or her death. Only the souls of infants, who had never had any direct contact with the dirt and filth of the earth, returned directly to the sky world, from where, after a period spent nursing on a breast tree, Ometeoti sent them back to earth to be reborn.

For the people in the Valley of Mexico, a human being made sense only in this world. After death, the elements that made up an individual had only a short and uncertain existence separate from one another before they were reabsorbed by the gods and recycled to form new human beings or were transformed into birds, butterflies, spirits, or demons, none of which recalled their human identity. There was no belief in punishment or reward after death for what an individual had done while alive.

The Maya believed that every human shared souls with one or more animal or spirit companions (*wayob*). Royal spirit companions were represented as fantastic beasts or combinations of beasts. The White Bone House Centipede was associated with the ruler of Palenque, while the Sun-bellied Jaguar was one of the *wayob* associated with the kings of Calakmul. Through dancing, massive bloodletting, drug-induced trances, and dreams, people sought, individually and collectively, to transform themselves into their spirit companions as a way of accessing the supernatural.

The souls of the dead descended into the underworld through caves, down the trunk of the cosmic tree, or by falling through the open jaws of the earth monster. All these openings were designated as door or hole. The souls of the dead, especially those of powerful rulers, could hope to escape from the underworld by challenging, outwitting, and finally killing its rulers, the Lords of Death. Then, by identifying themselves with gods associated with the sun and the planet Venus, they could rise temporarily out of the underworld into the daytime sky. The life-forces of dead rulers could likewise ascend from their tombs and be reborn as future monarchs of their dynastic lines. Divinized souls of kings were briefly called back into the world by their descendants' vision quests. Ordinary souls appear to have been trapped and doomed to oblivion in the underworld.

The ancient Chinese appear to have believed that each person had at least two souls: the *po*, which supplied the vital life-forces of a living person, and the *hun*, which provided the intellect, emotions,

and consciousness. The *po*, sometimes referred to as the lower soul, was believed to come from the underworld and the hun or upper soul from the sky realm. A child was born with only a *po* and acquired its *hun* when it first cried or laughed. When people died, their *po* souls, like their bodies, descended into the earth. The *po* travelled from the grave down to the Yellow Springs, where it remained as a ghost at least until it was recycled. The *hun* ascended into the sky, where it lived as a shining spirit that was able to communicate with its living descendants and intercede for them with the sky deities that controlled the natural world.

The *hun* souls of dead members of the nobility regularly received offerings of sacred harvests, domestic animals, and game killed in their honor and could punish living descendants who failed to provide them with satisfactory nourishment. Over time, the individuality of dead ancestors faded from memory, as a result of which their hun came to resemble nature spirits more. As this occurred, their name tablets in temples were removed from view and put into a box with those of more remote ancestors. Peasant souls, being weaker, seem not to have endured long after death and soon ceased to be useful intermediaries for their descendants. Commoner lineages did not have special temples where the souls of their ancestors were worshipped, but at specified times each year ordinary families seem to have made offerings to their ancestors at altars located within their homes.

The Andeans believed that life was created as a result of the combination of dry, enduring substances such as earth and rock and moving water. Each human being was believed to have two kinds of souls, one associated with each of these elements. Death resulted from the separation of the two forms of soul. The physical manifestation of this separation was desiccation, which occurred as water was withdrawn from the body. The *upani* soul, attracted to water, drifted away and rejoined the nearest lake, river, or spring, increasing its volume and helping to return water to its ultimate source in the ocean. Dead ancestors issued oracles and punished their living descendants with crop failures, disease, and death for improper conduct or neglect. Groups that relocated took the bodies of their ancestors with them and continued to venerate them in their new homes.

The Egyptians believed that at least six elements were necessary for a human being to exist. The body or physical shell within which every person existed was animated by its heart, the source of reason, memory, character, emotions, desire, and pleasure. The name and the shadow were components of personhood, along with multiple souls. Death occurred when the creative power, which passed from parents to children within a family line, departed from the body. Death disrupted the unity of the life-forces that constituted an individual, although Egyptians sought to do all they could to arrest this process. To prevent the disintegration of the corpse they mummified and buried it in as elaborate a tomb as an individual could afford. Once the body and its internal organs were embalmed, the mouth of the dead person was symbolically opened prior to interment so that the body might once again speak and eat.

The Egyptians believed that the dead could use their supernatural powers to harm people who had treated them badly during their lifetime or relatives who neglected to provision them after death. They could also use their easier access to the gods to intervene in favor of relatives who pleased them. If the dead were thought to be causing harm, letters addressed to them were left at their tombs, seeking to learn what was troubling them and what had to be done to win their approval. Answers appear to have been received mainly in dreams. The supernatural powers of the dead do not appear to have been markedly greater than those they possessed while alive. Moreover, contact between the living and the dead seems to have lasted only as long as people who had known the dead person

remained alive

Egyptologists used to maintain that in the Old Kingdom it was believed that only monarchs and those who were able to construct elaborate tombs and endow them with perpetual funerary offerings were able to enjoy life after death. It has long been evident, however, from the village cemeteries that George Reisner excavated at Naga ed-Deir, in Upper Egypt, that from Predynastic times ordinary people performed scaleddown versions of the funerary cults of the upper classes. Excavations of the burials of craftsmen and workmen who constructed the Fourth Dynasty Giza pyramid complex have revealed small tombs and evidence of cults that were based on the same general ideas that guided the burial practices of the upper classes. Hence it appears that, at least as early as the Old Kingdom, all classes had generally similar aspirations concerning life after death, even if the same marked social distinctions were observed in realizing these aspirations that applied in everyday life. By the Middle Kingdom, all who could afford it sought to identify themselves after death with Osiris, the supreme exemplar of a god who was surviving in a changeless state. This required embalming and the performance of cost, esoteric rituals that during the Old Kingdom had remained the prerogative of royalty.

Religion of the Paleolithic People: The above description of the religions of early civilizations largely outlines the Bronze Age civilizations, which the Harappan Civilization was one. These beliefs obviously stems from the earlier beliefs and practices of the Neolithic era, going back even to the Paleolithic thought process. These remnants of earlier times are evident in all early civilizations but they have not been studied. The Harappan Civilization seems to be an exception; here, for instance, Shereen Ratnagar has paid special attention on these elements and defined the Indus religion(s) in terms of the Neolithic and the Paleolithic. We shall discuss this approach in Chapter II.4, here we touch upon this aspect of early religious thought in generalities.

Religious behaviour is thought to have emerged by the Upper Paleolithic, before 30,000 years ago at the latest, but behavioral patterns such as burial rites that one might characterize as religious - or as ancestral to religious behavior - reach back into the Middle Paleolithic, as early as 300,000 years ago, coinciding with the first appearance of *Homo neanderthalensis*. Religious behavior of the Upper Paleolithic and to a great extent of the Neolithic agropastoral groups may combine ritual, spirituality, mythology and magical thinking or animism - aspects that may have had separate histories of development during the Upper Paleolithic before combining a "religion” of behavioral modernity (19).

According to Vincent W. Fall (20) ancestor cults first emerged in Upper Paleolithic societies. He argues that the elites of complex Upper Paleolithic societies (like the elites of many contemporary complex hunter-gatherers) may have used special rituals and ancestor worship to solidify control over their societies by convincing their fellow foragers that they possess a link to the spirit world that gives them control over both the earthly realm and access to the spiritual realm.

Religion of the Upper Paleolithic foragers involved sympathetic magic. The Venus figurines - which occur abundantly in the Upper Paleolithic and later Neolithic archeological record - provide an example of Paleolithic sympathetic magic: people may have used them for ensuring success in hunting and to bring about fertility of the land and women. Scholars have sometimes explained the Upper Paleolithic Venus figurines as depictions of an earth goddess or as representations of a goddess who is the ruler or mother of the animals. James Harrod has described them as

representative of female (and male) shamanistic spiritual transformation processes.(21)

Peoples HC (22) present a cross-cultural analysis showing that the presence of an active or moral God in early societies varies generally along a continuum from lesser to greater technological complexity and subsistence productivity. Foragers are least likely to have these entities. Horticulturalists and agriculturalists are more likely. Pastoralists are most likely, though they are less easily positioned along the productivity continuum. They suggest that belief in moral Gods was fostered by emerging leaders in societies dependent on resources that were difficult to manage and defend without group cooperation. These leaders used the concept of a supernatural moral enforcer to manipulate others into cooperating, which resulted in greater productivity.

Summary: As a way of surmounting their fears and uncertainties in an unpredictable world, people in early societies created rich pantheons of deities who represented natural phenomena, such as gods of water or sun. In myths and leg


Venus of Willendorf

ends about their deities, gods and goddesses engaged in activities in which they attempted to control unpredictable aspects of nature, for example, ensuring adequate rainfall for the cultivation of crops and the rising and setting of the sun at appropriate times of day. The power of the gods and the ability of people to appeal to them preserved the natural order of things. None of the early civilizations studied so far was found to be monotheistic. Even though there is always the possibility that the Harappans might indeed be

unique among all the civilizations. On the end of the spectrum, all early civilizations appear to have religious practices which seem to have originated in the Neolithic, or even the Paleolithic times. This aspect seems to be particularly notable in the case of the Harappan Civilization. The broad geographical and temporal scope of such studies provide us with some guidelines for examining

Indus material imagery within the contexts of the kinds of ideological realms and religious worlds we described for other civilizations, both neighboring and farther afield.

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Chapter II.2.

The World of Gods and Goddesses



In early civilizations, it was assumed that the natural world, of which humans were a part, was suffused with and animated by supernatural powers. There was no distinction between the natural and the supernatural: everything was alive, conscious, and interrelated. Nature functioned because it was

animated by powers that behaved much like humans but were usually much stronger and therefore could determine human destiny. These powers are variously referred to in the anthropological literature as 'gods', 'goddesses', 'deities', or 'spirits' (1).

Deities possessed reason, will, a full array of human emotions (including love, anger, jealousy, ambition, and compassion), and the ability to communicate with each other and with human beings. They also possessed enhanced powers that enabled them to do what ordinary humans could not. They lived longer, were able to change shape, moved instantaneously from one place to another, could be present in many places at the same time, and travelled back and forth between the terrestrial realm and the extraterrestrial ones. Human souls could also move about in dreams and shamans could visit the realms reserved for the gods, but for humans these were special capacities rather than normal attributes. The gods, or at least the mightiest of them, also possessed the power to create and sustain the universe.

In line with other early civilizations (see Chapter II.1.), the Harappan society seems to be populated by a number of gods, goddesses and other deities, although their identity and nature is problematic. Gods and goddesses are there but they are not as important as they are, for example, in Mesopotamian, Egyptian, Mayan, and Inca cultures. Harappan religion seems to be a continuation of the beliefs of the

pre-urban, primarily of Neolithic, cultures of Baluchistan and Sindh, i.e. a combination of superstitions, animism, superimposed by belief in nature gods and goddesses, without a highly developed priesthood and temple culture.

The Harappan religion is not centered around gods and goddesses, but still it is routinely described in terms of gods and goddesses. More and more, it is being presented in terms of polytheism. Polytheism is the belief in multiple deities, usually assembled into a pantheon of deities, along with their own mythologies and rituals. Polytheism was the typical form of religion during the Bronze Age and early Iron Age in most of the contemporary civilizations. It is well documented in historical religions of Classical Antiquity, especially Greek polytheism and Roman polytheism. It persists into the modern period in traditions such as Hinduism, Buddhism, Shintoism, and Chinese folk religion. In a modified version, it prevails in a large sector of Muslim societies in Pakistan, India, Iran, Afghanistan, and Central Asia, where the widely held belief in supernatural powers of their various living and dead saints as well as the independent powers of the *jinns* and wandering souls significantly dilutes the purported concept of monotheism.These beliefs cannot be cleanly separated from the animist beliefs prevalent in the early religions of South and Central Asia.

The belief in gods, goddesses, and other deities is also accompanied by prominent temples and shrines. Both of these elements are not present in archaeological record of the Indus Civilization and this has created doubts among several scholars who propose that, in spite of a high level of material culture, the Harappan society was not yet mature enough as to construct such belief system and the rituals that go with such constructs. According to these opinions, the religious beliefs of the Harappan people were still embedded in the framework of the Late Stone Age and that they were mired in elementary superstitions, animism, shamanism, and the like. In this respect, the comparative studies of Bronze Age cultures, although illuminating in themselves, are only partially relevant to the Indus society.

Despite these misgivings, we have enough archaeological evidence that indicates Harappan religious beliefs in a wide array of gods, goddesses, and other deities. The Harappan world may have not been as densely populated by gods and goddesses as, for example, that of the Mesopotamians, the Egyptians, and the Mayans, but they were there. The Harppans may have not built massive temples for their deities as did the Mesopotamians and the Mayans for their gods and goddesses, but it is possible that the Harappans worshipped them in the open rather than specifically constructed buildings. In the absence of temples and shrines, and in the absence of evidence for a well-organized and elaborate clergy, our evidence comes from the Harappan seals, figurines, pottery paintings, and inscriptive notations. In the followings, we shall take up these pieces of evidence and try to construct the world of gods, goddesses, and other deities among which the Harappans of Mohenjo-daro, Harappa, Chanhu-daro, Lothal, and Kalibangan lived. It must be kept in mond, however, that the presence of a full polytheistic religion, such as Hinduism, complete with a ritual cult conducted by a well-defined priestly class, requires a higher level of organization and is definitely not present in the Indus Valley.

Mother Goddesses: Anthropologists all over the world have theorized that the early human societies revered the 'feminine' as the very source of all creation and in that capacity they established a 'goddess' by various names as their presiding deity. It is also asserted that it was only much later when men emerged as the only political force because of their military prowess, when the reign of 'goddesses' was either totally annihilated or subdued to a negligible, secondary role.

Although this theory has seen several changes since then, it was under this general visualization of human history that Marshall (2), the excavator of Mohenjo-daro, noted the various terracotta figurines of a standing female who, except for a girdle of beads or cloth around her loins and often necklaces or collars of beads and medallions, was nude. Some of the figurines also had fanshaped headdresses sometimes with pannier-like projections which might have served as lamps or incense burners. Marshall saw the correspondence between them and those found in Western Asia and it was “difficult to resist the conclusion that the Harappan figurines also represented a Mother or Nature Goddess and served the same purpose as their counterparts in the West” (2). He further hypothesized that this Great Mother Goddess was absorbed into the later religion of the Indus Valley and subsequently transformed into the figure of *Sakti*, *Kali Maan* (the Black Mother), *Sita*, *Lakshami*, *Sarasvati*, *Parvati*, etc, or innumerable village goddesses in later forms of Hinduism.

Marshall further stated that these female figurines were cult images for household shrines in line with the current Hindu practices in India. He summarized his thoughts as follows: “The Great Mother Goddess was made manifest in female figurines and other iconography. Some of the female figurines manufactured by Indus peoples were toys, but others were votive offerings, or perhaps cult images for household shrines” (2).

In traditional Hindu society, hand-modeled terracotta figurines are used for domestic rituals in which a woman seeks specific benefits: a child, good health and long life for her husband and family. These figurines are sacred during the actual ritual and offering, but after the ceremony is over, they often are left to the elements or used as toys by children. Eventually, the fragile objects are broken or forgotten and so end up in the trash, much like the patterns we see from the Indus cities.

In order to bring the Harappan religion closer to modern Hinduism, Marshall also tried to connect the Indus female figurines with the duality of divine power through a god and his consort. In the classical Hindu thought the deity and his consort represent the dual aspect of the divine unity which together symbolize the power of the godhead. Later commentators, especially from the West, played up this aspect to the hilt and wove complicated webs of esoteric speculations, sometimes bordering absurdity, around it. The theme was then picked up by some Indian archaeologists who are still weaving elaborate motifs on this fabric.

Worship of the Mother Goddess can be traced back to the earliest stages of human society. Figurines of pregnant females with exaggerated sexual features have been found among remnants of hunting-gathering societies dating from the Upper Paleolithic period. These figurines have been interpreted as symbolic expressions of fertility cults and as such the worship of the Mother Goddess or the Earth Goddess has been quite prevalent among Paleolithic and early Neolithic societies.

In these early societies, collective labor was necessary for the survival of the group. A surplus of people could always move away, but too few people meant death for the group. Production of the necessities of life was synonymous with the reproduction of the group. Both production and reproduction were unstable, however, and the infant mortality rate was extremely high. This apparently gave birth to a belief in a supernatural being who could help humans to reproduce in numbers and who could help the offspring survive, hence a *Mother Goddess*.

Early human societies entirely depended for their food on nature, on which they had little control. The hunter-gatherers and early agriculturists probably regarded the production and produce of the soil as mysterious and sacred - it offered them a rich bounty but off and on withheld it back. This

mystery called for a supernatural power, who controlled the earth's fertility - probably a Goddess of fertility, probably an *Earth Goddess*. Agriculture taught man the analogies between woman and the field, between the sexual act and sowing, and illustrated the notion of life as rhythmic with death as a return to the origins of life, the womb. The worship of the Earth Goddess therefore, continued in the argo-pastoral societies and these ideas can be seen in the early and later iconography and mythologies of Earth Goddess cults, gradually merging into the Mother Goddess cults.

In Eurasia, the earliest traces of Mother Goddess or Earth Goddess worship date from the Upper Paleolithic era. These cultures introduced small female figurines of bone, ivory, stone and bas-relief, commonly called *Venuses* in European context. The bodily features of these *Venuses* tended to be exaggerated, while the often featureless head was ignored. In moving to central and western Europe, the bodies of the Goddesses became cruder and more conventionalized. Numerous headless clay female statuettes have been discovered in northern Iraq near the ancient city of Ninevah which dates to before 4000 BC (3). These are very similar to *Venuses*, with large breasts and hips and slender waists. The squatting position of many of these figurines indicates childbirth. As in the Paleolithic *Venuses*, the head was rarely depicted, the body shows a tendency towards conventionalization, and red pigment was often used.

In the Bronze Age, trade routes and common bonds of culture united the ancient world. Female statuettes, often very similar in style to each other, have been discovered in a wide range of countries from the Indus Valley to





Mother Goddess from Indus Valley **Female figurines, dubbed as ‘mother goddesses’, from Mohenjo-daro**

the Aegean because of this cultural exchange. Wether they appear earlier or at somewhat later dates, or in smaller or larger numbers, these figurines indicate certain common religious developments and religious symbols based upon the parallel development of agricultural economy.

Modern social theory proposes that the early argo-pastoral societies were by and large matrilineal. These cultures usually worshipped predominantly female deities. The worship of the Mother Goddess in the Indus Valley originated in such a matriarchal state of society, an environment in which Astarte was conceived in Syria, Cybele in Asia Minor and Isis in Egypt. Further evidence of this thesis may be found in the fact that contemporary India contains numerous matriarchal tribes and castes whose mode of production resembles that of the early Neolithic (4). In Pakistan, female figurines begin to appear as early as 7500 BC at Mehrgarh in the Kachi Plains of Eastern Baluchis


Another Indus lady (or a mother goddess) from Harappa. Notice the two oil lamps as a part of the headdress

tan. The Kachi Plains are contiguous with the plains of the Lower Indus Valley, and the culture developed in the early settlements here was absorbed to a very large extent in the culture of the Harappan Civilization. The Zhob and Kulli sites in northern and southern Baluchistan, belonging to 4th and 5th Millennium BC, have furnished a fair number of terracotta figurines in which we may recognize the earliest embodiment of the primitive Mother Goddesses. The Kulli figurines finish at the waist on a splayed pedestal, arms bent with hands on the hips, breast usually shown, eyes fashioned from small stones, hair elaborately dressed, ornamented by oval pendants resembling cowrie shells and bangles on arms and wrists. In the cultures to the North and Northeast of Quetta grouped around the Zhob River, a number of identical terracotta figurines have been found at the sites of Dabar-kot, Periano Ghundai, Sur-Jangal and Mughal Ghundai. Damb Saadat phase (*ca.* 3000 BC) in the Quetta Valley , Baluchistan, furnish a distinct type of female figurines, with elaborate hairdo, carrying what appears to be flower bouquets on both sides of the face, naked but extensively adorned with necklaces which cover the upper part of their breasts. The legs are shown joined together and all the figurines are in a seated position. Terracotta figurines belonging to the urban period of the Indus Civilization have been found from a

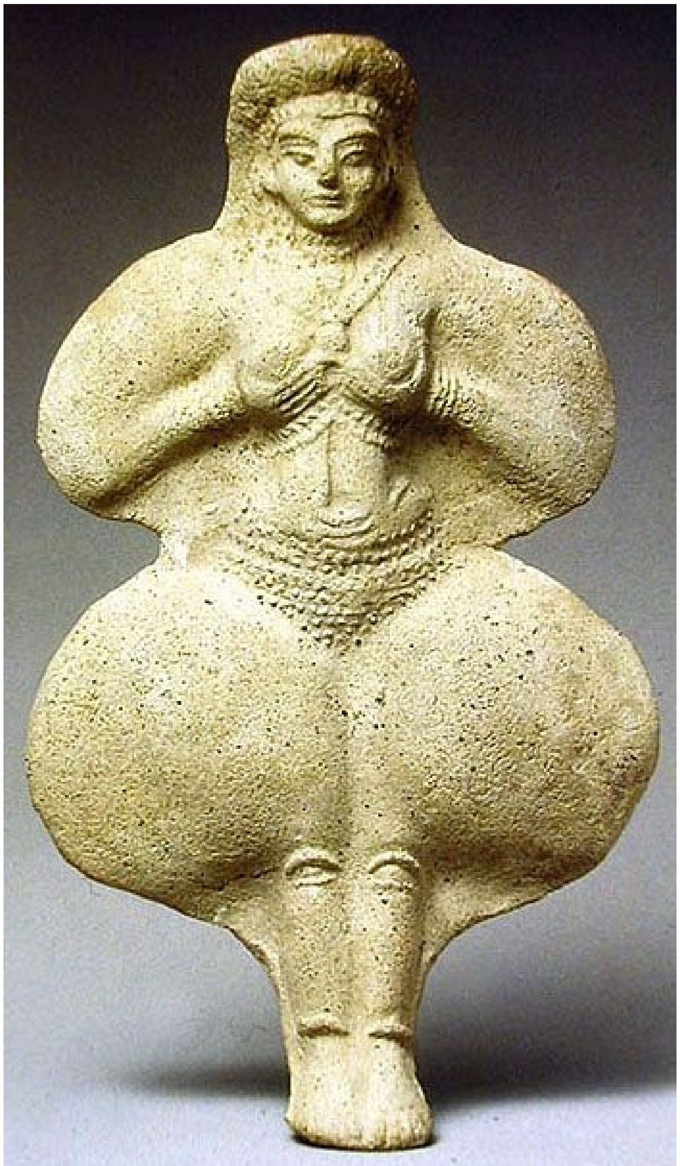


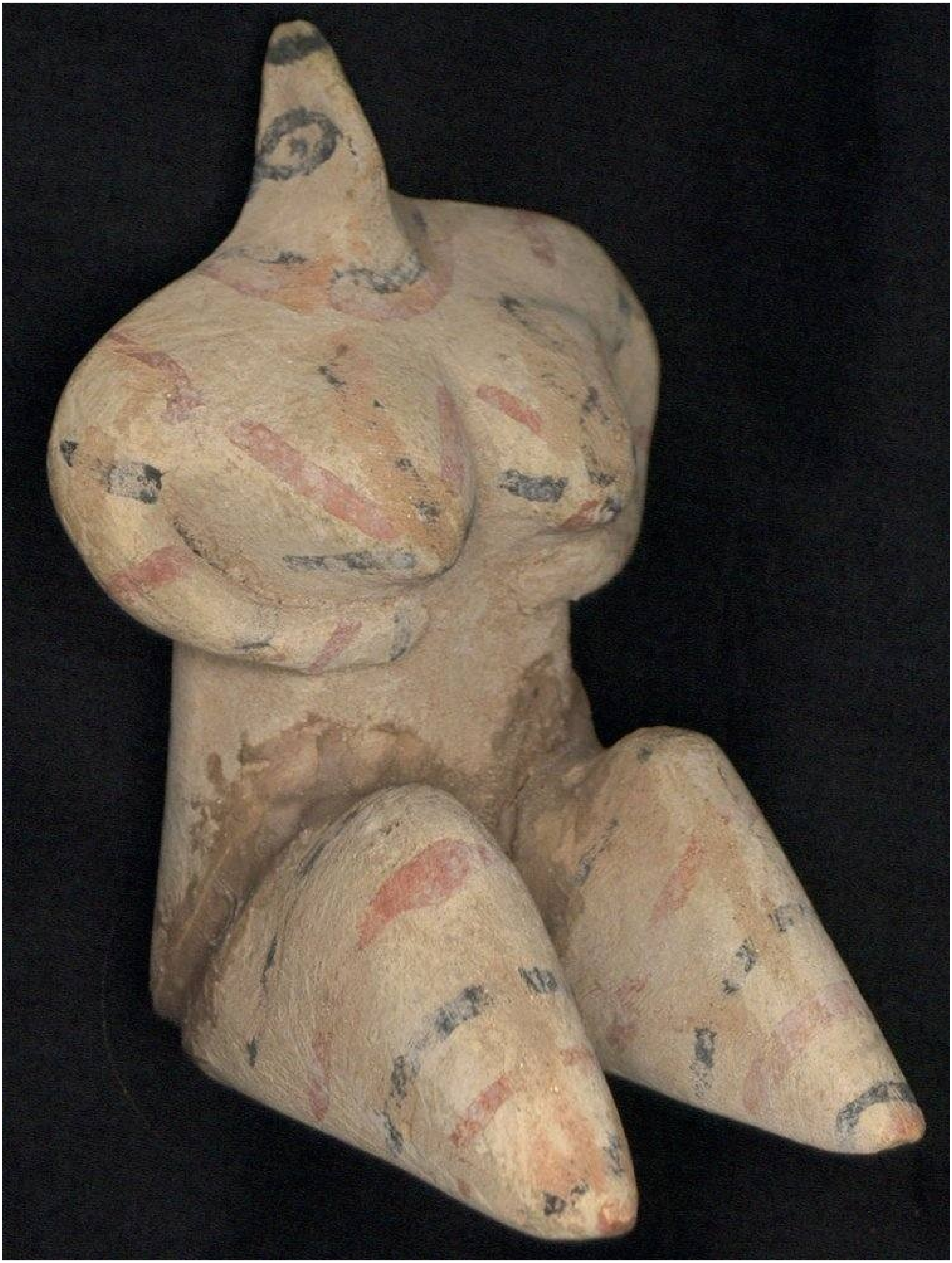
Goddess figure, Naqada Culture, 4400-3000 BCE,

Predynastic Egypt. *Keith Schengili-Roberts,*

number of sites, including Nausharo in the Kachi Plains of Eastern Baluchistan, Nindowari in the Baluchistan Highlands, and Harappa in the upper Indus River Valley. Majority of them, however, belong to Mohenjodaro in the lower Indus plains. These are heavily adorned with a variety of chokers and necklaces, armlets, bangles and headbands. Most of them wear a wide girdle round their waist and loin cloths. They have long hairs, which are neatly arranged. Some of them also wear heavy headdresses. Generally the artistic quality of these figurines is low. Unlike the highly refined technologies employed to manufacture intaglio seals and sophisticated pottery and vessels, less effort seems to have put into the manufacture of figurines. The Mother Goddess figurines have not been found

This terracotta figure and many others like her were found in southwest Iran, in the ruins of Susa, the great city of ancient Elam. She is about 4000 years old.





This figure, originating from early Mesopotamian civilization,

is known as Tel Halaf, after the place where such artifacts were

first found. Archeologists theorize that the figures' emphasis on

breasts and thighs points to motherhood and suggests an ancient fertility cult.

The Aztec goddess Tlazolteoti was a complex deity, known in one as pect for luring people into bad behavior and in another for absolv ing them of their sins. This figurine at the Tate Gallery in London shows Tlazolteoti during childbirth in her

mother goddess aspect

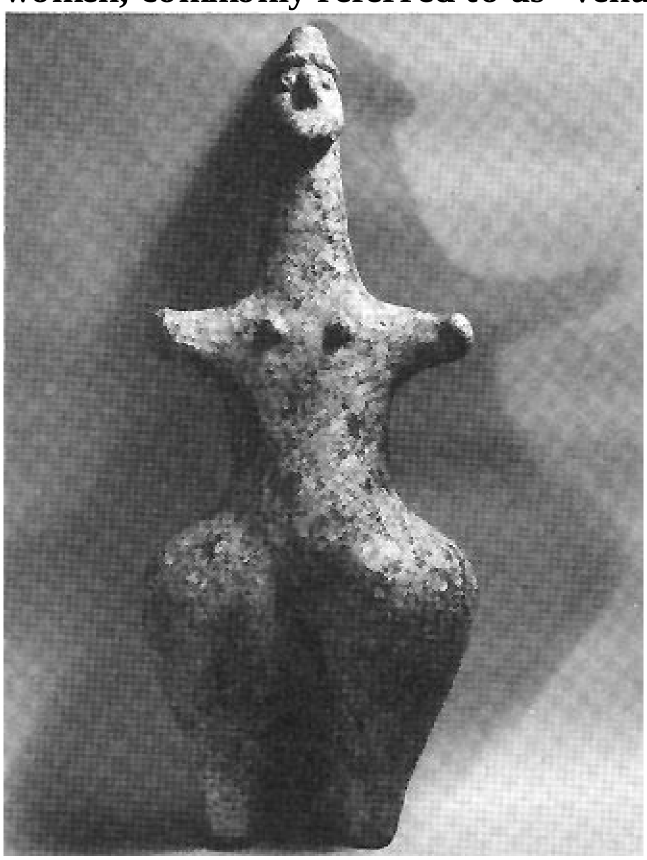


throughout the Harappan realms but come mainly from sites in the Indus Valley and Baluchistan. The

large number of terracotta figurines found from different sites, and their somewhat crude design, indicate that these figurines were disposable objects. After the rituals these figurines were discarded and were probably used by the children as play objects.



Stone Age sculptures of women, commonly referred to as 'Venuses' or a representation of a 'mother goddess'.



A 'Mother Goddess' figurine from Neolithic Amlash culture (Iran)

Many of the Harappan terracotta figurines wear a fan-shaped headdress with pannierlike side projections. Mackay has interpreted the black stains on many of these headdresses as having been

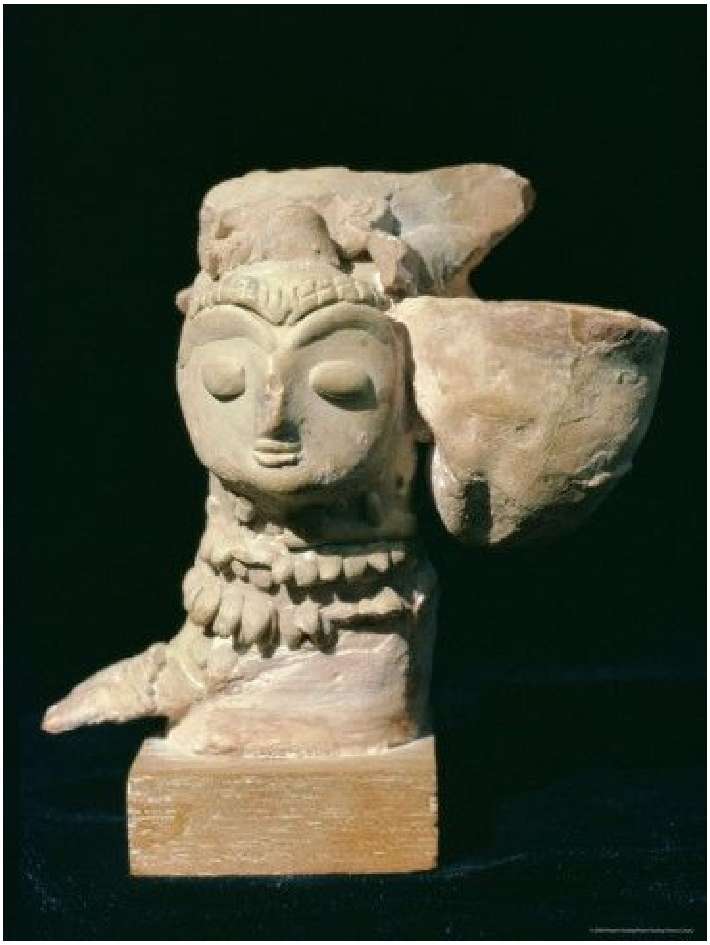
caused by smoke. From this he postulated that these figurines were used as small lamps in a Mother Goddess cult of whom they were symbols (5). The fact

that similar headdresses and pieces of jewelry occur on female figurines from Neolithic Mediterranean would further support this hypothesis.

The general notion that the Harappan religion was largely based of fertility cults and that the worship of a ‘Mother Goddess’, ‘Earth Goddess’, or Goddess of Fertility’ was a ritual manifestation of such a belief is subscribed by many anthropologists of the West and the Vedic scholars of India. The arguments generally go like this: a) Agricultural societies are associated with fertility and the goddess cult represents fertility.
b) There are cross-cultural parallels between Harappan and Mesopotamian civilizations.



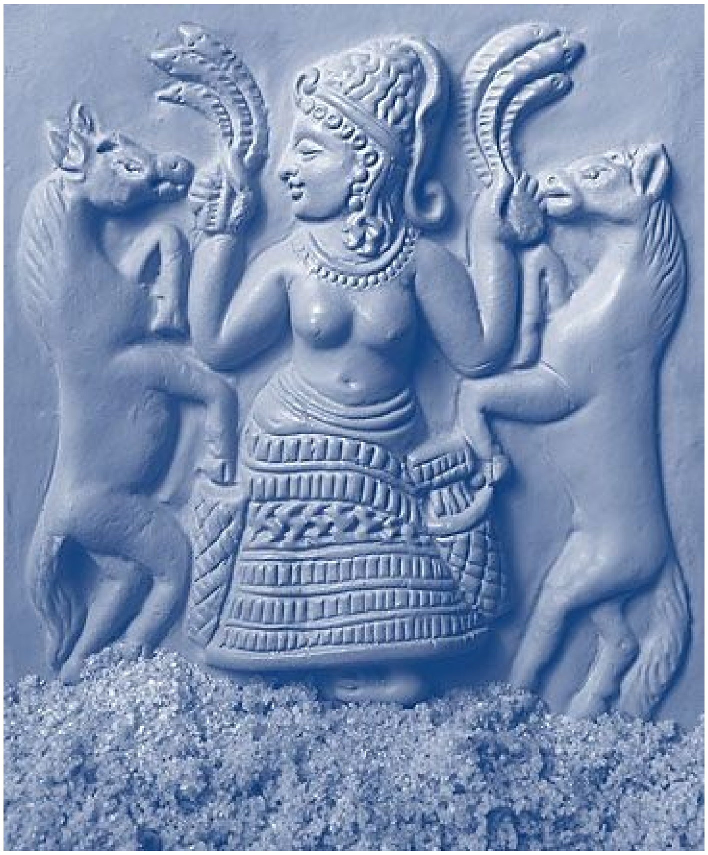
Zhob Valley, Baluchistan, Mother Goddess, ca. 3500 BC



“Mother Goddess” Statue from Mohenjodaro, Indus Valley Civilization, ca. 2500 BC (*Karachi Museum, Pakistan)*

c) Mother goddess is related to classical Hinduism, which itself may have its roots in the Indus Civilization.

d) The RgVeda witnesses the existence of female deities in the Vedic religion, a generally accepted foundation of later Hinduism.
In spite of these arguments, and several others, the evidence for the 'Mother Goddess' as the cen



Astarte, a goddess known throughout the Eastern Mediterranean from the Bronze Age to Classical times



The goddess Isis from Egypt



Statue of Goddess Cybele from Anatolia. She was very popular in Asia Minor and later on in the Greek World.

tral feature of Harappan religion is not terribly robust and just which functions the terracotta female figurines played in Indus life is open to question.

As an alternative, Marshall suggested that these figurines may have been votive offerings to other deities instead of being themselves the representations of deities. A votive generally made in order to gain favor with supernatural forces. An example from modern-day Pakistan would be the common practice of offering of a *chador* (a sheet of cloth) to the grave of a sufi saint.These offerings are apparently made in anticipation of the achievement of a particular wish, but in some cultures, from which documentary evidence survives, it has been more typical to wait until the wish has been fulfilled before making the offering. Votive offerings have been described in historical Roman era and Greek sources, although similar acts were common in Egypt and probably in Mesopotamia. The ancient Egyptian practice of dedicating small objects to deities as a means of establishing a lasting, personal relationship between deity and donor is well known. Large deposits of Early Dynastic and Old Kingdom votive offerings have been recovered from numerous sites throughout Egypt.

Agreeing with Marshall on this account, there are some later researchers, such as Ardeleanu-Jansen (6), who believe that the majority of the terracotta figurines in the Harappan Civili



'Mother Goddesses' from Early Indus (Damb Saadat phase, ca. 4000 BC) period

offering is one or more objects displayed or deposited, without the intention of recovery or use, in a sacred place for broadly religious purposes. Such items are a common feature of ancient societies and are zation were most likely votive offerings rather than representing a mother goddess deity themselves. However, like the notion of the Mother Goddess, this hypothesis also lack archaeological support. These figurines do not occur in uniform archaeological contexts. Some were part of the garbage in the street jars used for urban disposal of waste or post-cremation urns at Harappa, and they do not cluster near street junctions where trees could



A 'Mother Goddess' terracotta figurine from Harappa, *ca*. 2500 BC

sary (7). In the first place, not every depiction of a woman needs to be of religious significance: there is no intrinsic evidence for labeling red-washed terracotta as a goddess, let alone a Mother. Second, figurines portraying women are not as common or numerous as has been made out, even at Mohenjo-daro, where most of these were found. In the field notebooks of Marshall and Mackay 475 female figurines are recorded amongst a total of 3,335 terracotta figurines (males, females, and animals) and 1,500 stamp seals. More than half of the so-called 'mother goddesses' occurred in private rooms (not directly accessible from the street entrance). Only 27 of the female terracottas were have stood, or in hearths, or near wells. Therefore, it is not easy to suggest that their function was votive.
mal representations such as bulls, birds and dogs, but also with monkeys, rams and other female or

male human figurines. Thus the interpretation according to which they are to be regarded as idols of the "Great Mother-goddess" symbolizing the procreative aspects appears to be too simplistic.

The concept of a Harappan Mother GodIn view ofdess has also been criticized from a wider angle.
this situation,
Ratnagar, among
other recent
scholars, advo
cates that a
change in per
spective is neces
The existence of such a universal deity has been largely predicated on the basis of a matrilineal society in the early Neolithic societies, eluded to in the beginning of this chapter. For example, the archaeologist Maria Gamuts put forward the notion of a "woman-centered" society surrounding goddess worship throughout prehistory and ancient civiliza



Female figurine with three sets of chokers and necklaces. One of the largest female figurines found at Harappa with common fan shaped headdress with cups on either side of the head. Discovered in 1991.

found on the Mohenjo-daro citadel, so that public or private worship there does not appear to have required the use of these figurines. Third, this kind of schematic representation of a woman is not

found at all Harappan sites: it is known in settlements along the Indus but is absent at the borderland settlements such as at Kalibangan and those located in Gujarat.

The Harappan figurines were not isolated finds but were usually associated with other terracotta images. They were found together with anigesting that she used the same techniques used in the past to disparage women but in this case to glorify them, and quotes another archaeologist, Pamela Russell, as saying: "The archaeological evidence is, in some cases, distorted enough to make a careful prehistorian shudder" (8). In an absence of a deciphered script and of graves with clear evidence of hierarchy, we cannot say whether the Indus Civilization was a matriarchy or not. Furthertions, by using the term

matristic "exhibiting influence or domination by the mother figure". These ideas as a cultural universal have been recently challenged. Archaeologist Sarah M. Nelson criticizes Gambuts, sug



A female fertility figurine from the Indus Valley Civilization
3rd millennium B.C., with multiple *Amanita muscaria* mushrooms encoded into her headdress.
(Museum of Fine Arts, Boston)

more, as Shari Clark (9) and Shereen Ratnagar have pointed out, every female figurines cannot be defined as being mother-goddess.

In summary, the evidence for mother goddess figurines in Indus religion is not particularly robust. Just which functions the terracotta female (and male) figurines played in Indus Civilization life is open to question. It might well be that some of them were multi-functional. Even Marshall was not that dogmatic about the religious functions of these figurines: “Others with children in their arms, or pregnant may be assumed to be ex-voto offerings, perhaps with a magical significance” (2).

Cults centered on women may well have existed amongst some Harappans, but not all. Let us recall that in any case this could not have been 'the Mother Goddess’ of later Hinduism because there is no single great goddess in Vedic religion who rivals the gods in importance and the great goddesses like *Parvati* and *Lakshmi* appear to have emerged relatively late in the pantheon of Hindu India. The female figurines from Mohenjodaro do not indicate the clear existence of a female deity; instead, they are more like simply decorative pieces.

According to Ratnagar it might well be that these ‘mother goddesses’ were simply an expression of the male’s artistic expression for female’s sexuality in parallel with the current obsession of the western male with the female body in almost all his commercial and artistic endeavors. Having said the above, one must admit that female sexuality is deeply engrained in Indus culture and ideology, and attention should be paid to this point in any exploration of beliefs of the Indus Civilization.

A Pigtailed Deity that Resides in Trees: The existence of a female deity, a goddess of some sort, is probably more evident in the Harappan iconography than in the figurines discussed above.This is a pigtailed figure, generally standing within the trunk of a tree, supporting a long pigtail on her head and wearing a trident headgear. This deity is as common as the mail Horned Deity himself, described in the following pages. The seals and tablets depicting the offerings to a tree are generally considered as narrating a mythic story but they can more logically be construed as representing the veneration of a tree spirit, probably a pigtail deity that has her abode in trees, particularly in the pipal tree. A number of archaeologists support this feature as an evidence for the existence of a female deity, whether we call it a ‘mother goddess’ or something else.

One such seal (seal 430) from Mohenjodaro shows an apparently female figure, wearing a pigtail on her head and a three-pointed headdress, standing in the midst of a tree. In front of the tree and standing figure is a second human, in a headdress and hairdo similar to the principal. But, this figure is in a kneeling posture suggesting a supplicant or worshipper. Behind the supplicant is a goat with wide, corkscrew horns jutting out parallel to the ground. On the lower portion of the seal are seven female ministrants or votaries wearing tunics, pigtails, and projecting from the top of their heads, what appear to be small branches. They have lesser headdresses and their long hair is differently displayed. Marshall wrote of them: “The seven figures in a line at the bottom I take to be female officiants or ministrants of the goddess. The plumes on their heads might be feathers; but it is more probable that they are small branches, such as those in Kafiristan (northwestern Pakistan) are still worn on the head by officiants at the worship of the Himalayan pencil cedar . . . when branches are also burnt in honor of the tree spirit” (10). Some scholars see in this and similar depictions (see below) an epiphany of the Great Goddess in her sacred tree, the universal symbol of life and inexhaustible fertility. There is some justification, therefore, in thinking of the figure in the tree as a divine personage.

One must watch the strong tendencies of scholars to connect the Indus religion with Hinduism of modern India and tracing the known in the unknown.

The devotee, or the priest, wearing a horned headgear is shown making his offering of a goat to the deity, probably as a sacrifice. The arms are raised as if stretching out to the figure in the pipal enclosure, perhaps in a gesture of supplication. A similar scene is depicted on a tablet (reproduced above) wherein a horned supplicant is shown to be offering a goat to this deity who is standing in the middle of a tree. In both depictions, an object, looking like a head, is shown on a stool beside the supplicant. Almost the same scene is noted on an incised shell (reproduced above). On some other tablets, the deity is shown standing under an arch of vegetation or a symbolic depiction of a tree trunk. There is one tablet where the deity is shown standing alone, probably in the open. Taken all this together, the evidence is strong enough as to indicate the existence of a female deity to which offerings were made.

As stated by Possehl (11): “there is a strong dichotomy in the Indus Civilization concerning males and

an association with animals and females with association with plants. I therefore take the supplicant associated with the goat to be male and the person inside the plant to be a woman". Marshall noted: "The nude deity appearing between the branches is very small and roughly portrayed, but the absence of any evidence of male sex, coupled with the fact that tree deities in India are usually female and that the ministrant figures on this seal also appear to be women, all point to its being a goddess rather than a god' (2).

Number seven, as seven human figures seems to be a recurring theme in the Indus iconography and a conclusion can be drawn that it had some religious or magic relevance. Possehl points out that the seven human figures have often been connected to the Seven Sisters, referring to the RgVedic seven rivers of the region which may include any seven rivers from the Kabul to the Beas. In fact, it has been hypothesized that the notion of the "seven river sisters" came to the Vedic *rishis* from a Harappan source: it is at least as possible as the idea that they made it up for themselves. The Allchins (12,13) note that the seven figures have been "identified with the seven *rishis* (sages) and with the Seven Mothers of recent times." Parwild animals, sometimes alone. He wears a pair of curving buffalo horns and a tall headgear from which three branches of leaves are sprouting. In some renderings he is without horns and headgear. He is recognized by a particular posture as he sits on his "throne". He is represented in several media but the motif is most well known from representations on steatite seals, a few terracotta tablets, and engraved on several small copper plates. Among these images, perhaps the best-known is a seal found by Mackay and thought to have been a forerunner of the consummate Hindu deity, Siva. The seal was discovered in the northwestern portion of Mohenjo-daro and would seem to date to *ca*. 2250–2150 BC. This is seal number 420 in



Indus seal 430, depicting 'seven sisters', a deity (probably a female) in the tree, kneeling devotee, and a sacrificial goat

pola (14) has proposed that they represent the children of Brahma and Sarasvati, the seven sages of the constellation Ursa Major. It is, however, difficult to subscribe to such explanations as they represent too high a flight of imagination without any strong launching pad. One must watch the strong tendencies of scholars to connect the Indus religion with Hinduism of modern India and tracing the known in the unknown.

The Buffalo God: By far the most discussed and hotly debated lead to the Harappan religion is a horned deity. He appears sitting on a “throne”, a stool with hoofed legs, sometimes surrounded by Mackay's report, and it is sometimes referred to as simply "Seal 420".

Marshall describes this figure on the seal as being in the attitude of a practitioner of yoga. The male sits on a dais with his body erect, back straight, head full front, up and alert. His legs are bent double beneath him, the heels together, the toes down. His arms, covered with bangles, are outstretched with hands almost resting lightly, but not quite, on his knees. The head is surmounted by a pair of large buffalo horns meeting in a high central headdress from which three branches of leaves sprout. Four wild animals surround the figure: elephant, rhinoceros, water buffalo and tiger. Beneath the dais are two antelopes or ibexes. Seven Indus logographs are included on the seal, but one of them, a simple human stick figure, may be out of place and not a part of the inscription.The lower limbs are bare. Marshall believed that the phallus was exposed, but some consider this

to be simply a waistband. Marshall draws on the connection with Siva as “pre-eminently the prince of yogis – the typical ascetic and self-mortifier, whence his name . . . *Mahayogi* . . . in the course of time the yogi came to be regarded as a magician, miracle-monger and charlatan” (2). Marshall saw three faces to the central figure on this seal, and connected them to the three manifestations of Siva. In historical times, Siva is not only the *Mahayogi* but also the ‘Lord of Cattle’. In RgVeda, the most ancient religious material composed in the Indus Valley, there is no mention of Siva, it is the

god Rudra who is the “master of beasts” in the forest.

Along with this famous "proto-Siva" seal, another seal with horned deity, seated in “yogic” position, was found in the DK-G area of Mohenjodaro. This is a relatively simple figure (Seal 220) seated on a stool with legs carved in the shape of bovine hooves, just like the one depicted on Seal 420. The frontal visage is indistinct, but there appear to be additional faces on each side, making it a second possible example of the ‘three-faced, buffalo-horned deity’. The carving of the body shows well-defined pectoral muscles and stylized male genitalia. Like Seal 420, the headdress has three leaves branching out of the center, and two curving horns, one on either side. There are, however, no animals surrounding the horned figure.




the deity with a horned headdress and in the socalled yogic position seated on a stool under an arc. The tablet has been twisted and eroded, thus obliterating other details. Lastly, there is a molded tablet which has been quite recently discovered at the not-yet-excavated site, Ganweriwala, in Cholistan. Here also the figure sits on a pedestal, legs bent, tows together and pointing downward. Under the pedestal is a supplicant with a jar in hand, probably making an offering. The tablet is broken and we do not know if the figure was surrounded by animals. The horned deity also appears on a terracotta cake from Kalibangan. Here an animal is being dragged by a human probably for sacrifice.



An incised shell, depicting a female deity in the manner of the Seal 430





Depictions a female deity, always naked, and always wearing a headdress with a *trisula* (a three-

pronged symbol) of one kind or the other, abiding in a *pipal* tree, on Harappan seals and tablets. This figure radically differs from the one represented in the terracotta figurines.

Two recently discovered tablets, again from Mohenjo-daro, show this same deity seated on a pedestal. One of them is very similar to Seal 420, surrounded by animals, of which only the tortoise is recognizable. On the second tablet, the figure's posture is similar to that on other such seals but the figure does not wear horns and is surrounded only by two cobras while two devotees make their offerings. Another tablet of this nature comes from Harappa on the center of which is the depiction of There are some other tablets on which the horned deity appears sitting in his trademark posture, sometimes supporting the horns and sometimes not. For example, on one tablet the horned deity watches as a human hero fights with a buffalo. In another mass-produced tablet, the horned deity is standing within the trunk of a tree and he is being offered a goat as a sacrifice. On both of these tablets, the deity supports the curving horns.

Although Marshall identified the horns worn by the figure in Seal 420 as bull horns, Hiltebeitel (15) and others have noted that the central figure is not wearing bull or cattle horns but rather those of a buffalo, the shape and ribbing being the most diagnostic features. Indian tradition is rich in mythology and symbolism concerning the Buffalo God (*Mahisa*). The sweeping curve of the horns and the fact that the artist who carved this seal has attempted to indicate the distinctive ribbing of buffalo horns testify to this fact. The buffalo horn motif first appears in the Early Harappan and it is quite common there. A famous pot from the site of Kot Diji, just across the Indus River from Mohenjo-daro, has an early representation of a buffalo with a falo horns and bull horns are also somewhat different in their shape. While both buffalo and cattle horns are a part of the Indus imagery, the buffalo stands out as important by virtue of the Proto-Siva seal. This imagery goes to indicate the existence of a Buffalo God in the Indus society and seems to have been preserved in the folk ways of rural communities as the cult of the Buffalo God in present-day India.

Is the Horned Deity a Porto-Siva? Since its discovery in 1920s, the Seal 420 has been much discussed and debated but unfortunately in isolation; the other representations, cited above, serve only as a background. The controversial nature of the seal stems from the initial interpretation



12: M-304 A



Mackay's Seal 420 and impression from Mohenjodaro, Marshall's 'proto-Shiva' or Allchins' 'Pasupati', depicting a nude male deity (or a shaman?) with three (?) faces, seated in a yogic position(?) on a throne, wearing bangles on both arms and an elaborate head-dress with buffalo horns. Some see in it the modern Hindu god Shiva, the Pasupati, that appeared in the Indian iconography some 2,000 years later. To some, it is a fertility god with erect phallus. Some

would dismiss the whole affair as a depiction of a shamanic figure in trance and surrounded by animal spirits. In the end, you see what you want to see.

somewhat human face. This opt seems to date from the Early-Mature Harappan transition, within the time frame when the Indus urbanization was taking shape. There is also a very fine example of a Kot Dijian vessel found at Burzahom in Kashmir, with the buffalo horn motif. The Burzahom pot is probably what archaeologists call 'Late Kot Dijian' (2500–1900 BC), contemporary with the Indus Civilization. Other good examples of this motif come from Early Harappan levels at sites in the Gomal Valley. A yogic posture, even an ithyphallic pose, would not be inconsistent with a representation of the Buffalo God, who is separate from Siva. The Proto-Siva seal and the Kot Diji pot clearly represent the buffalo, not bulls, by virtue of the careful rendering of the ribbing on the horns. Bufascribed to it by Sir John Marshall and Earnest Mackay, the original excavators of Mohenjo-daro. The many distinguishing features associated with the figure on the seal were interpreted as indicative of the prototype of the Hindu god *Siva*: "My reasons for this identification are four. In the first place the figure has three faces and that Siva was portrayed with three as well as with the more usual five faces, there are abundant examples to prove. Secondly, the head is crowned with the horns of a bull (sic) in the form of a *trisula,* and both the bull and the *trisula* are characteristic emblems of Siva. Thirdly, the figure is in a typical *yoga* attitude, and Siva was and still

is, regarded as the *Mahayogi*. Fourthly, he is surrounded by animals, and Siva is par excellence the "Lord of Animals" *(Pasupati)* of the wild animals of the jungle, according to the Vedic meaning of the word *pasu,* no less than that of domesticated cattle." This is how Marshall summarizes his position. This interpretation, in effect, postulates that Siva worship stems from the Harappan culture, predating the advent of the 'Aryans' in the Punjab.

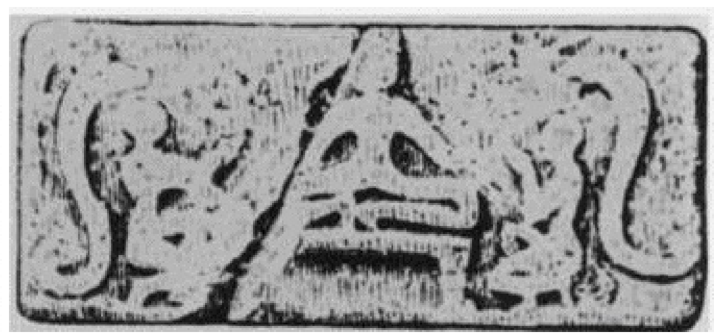
The force of Marshall's argument has endured. Indeed no matter what position is taken regarding the seal's iconography, it is always prefaced by Marshall's interpretation. On balance, the proto-Siva character of the seal has been accepted, although erroneously, and this view, often repeated as fact, has greatly influenced an understanding of the developments in Hindu art and religion. It is presently the stuff of textbooks all over



15: M-1181 A

Mackay Seal 220: compare it with Mackay's Seal 420





Two tablets from Mohenjo-daro, depicting Marshall's 'proto-Shiva'

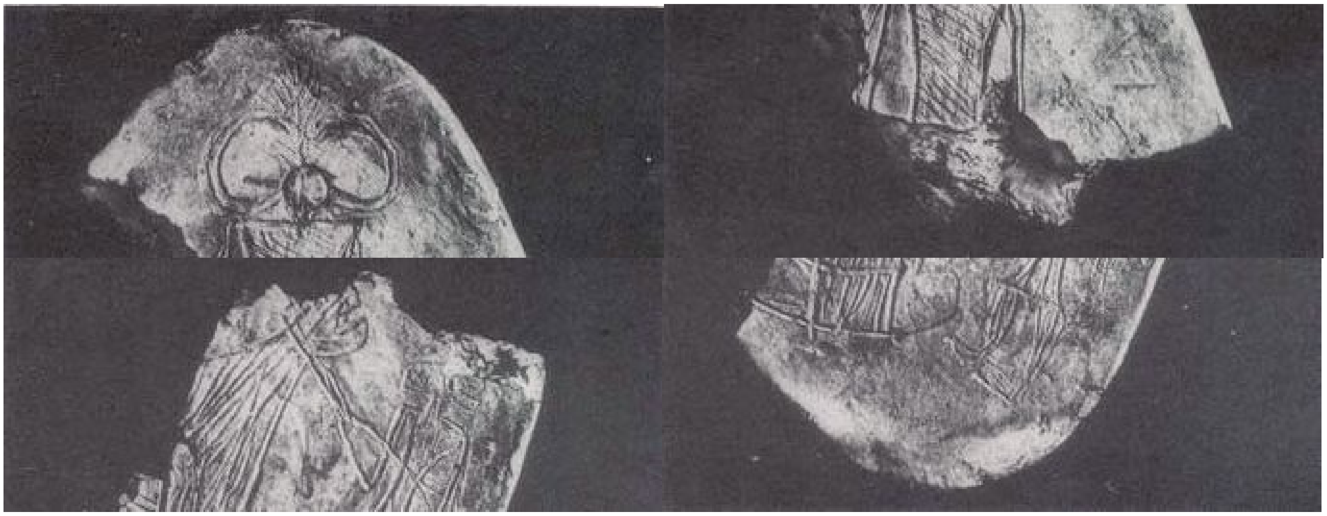


A recently discovered terracotta molded tablet (broken) from Ganweriwala in Cholistan, showing the familiar female deity and a supplicant



A twisted terra cotta tablet with a mold- made inscription and narrative motif from Harappa. In the center is the depiction of what is possibly a deity with a horned head- dress in so-called yogic position seated on a stool under an arch
(*Kenoyer and Meadow***)**

India and abroad. The question is: can one validly posit a theory from such limited evidence? Could not the main figure on this seal may represent a holy person or a shaman communicating with wild animals? And, are we not hurrying up connecting the historic Hindu Siva with a three thousand year



**A terracotta cake from Kalibangan. On the top is a 'horned deity' and at the bottom is an animal being dragged by a human probably
for sacrifice. Or is it a hunting scene, with magic provided by a horned shaman?**

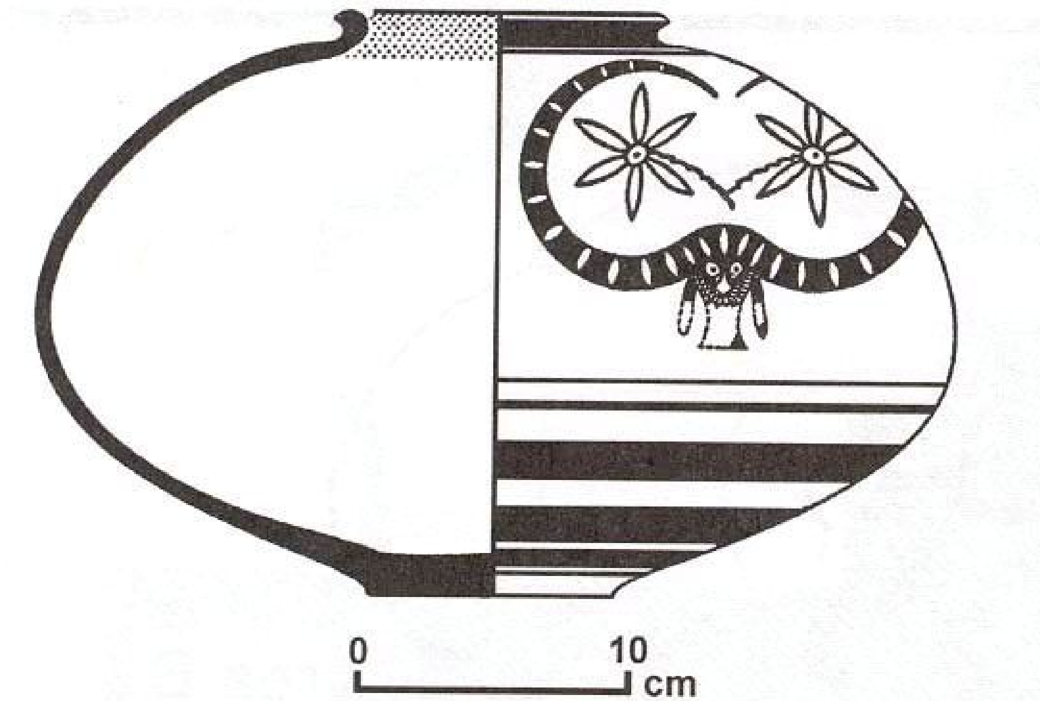


An Elamite artifact showing a horned deity.similar to the Seal 420, wrestling with

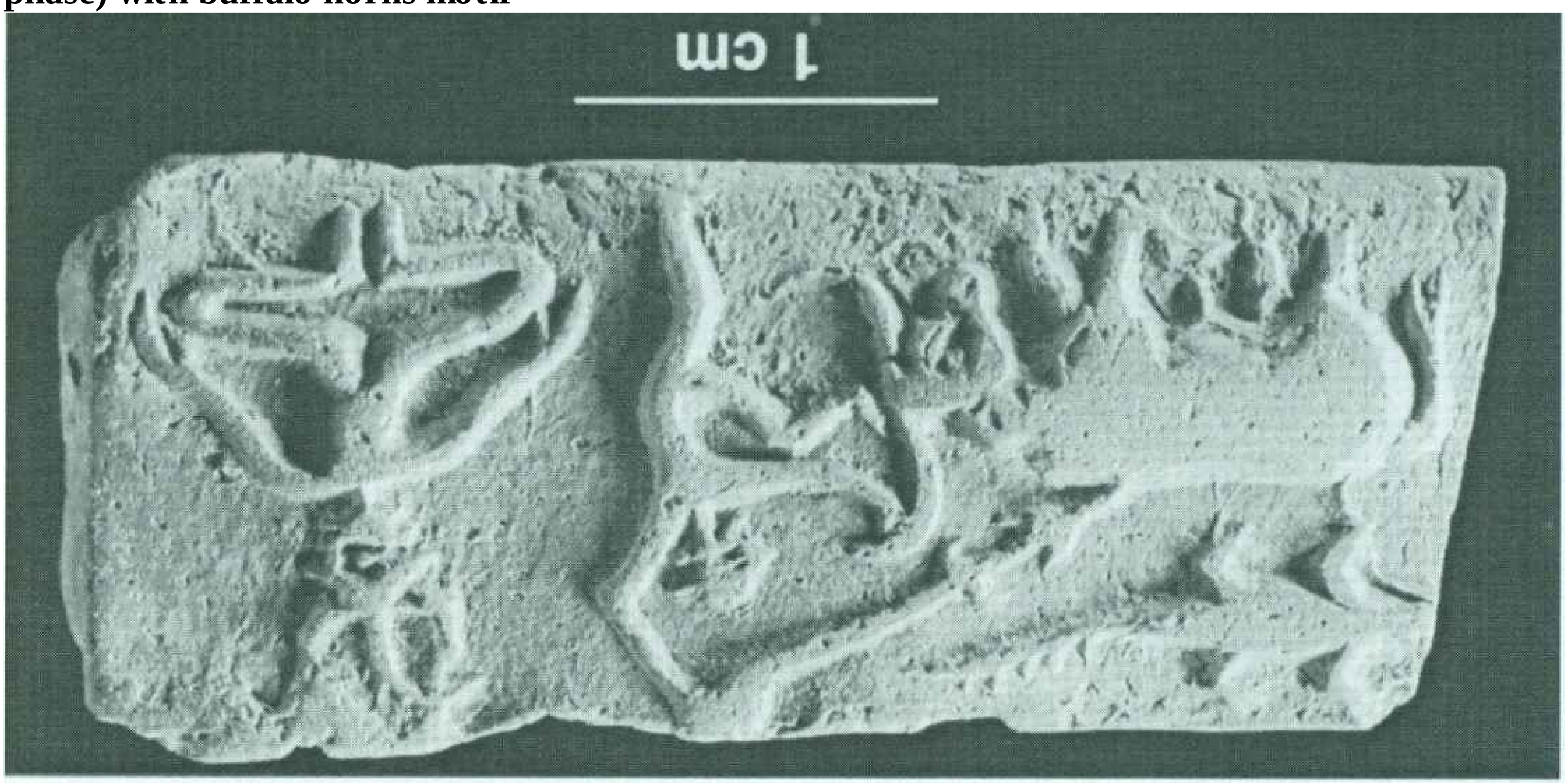
serpents

earlier Harappan portoSivia?
Several researchers have disputed, and are still disputing, Marshall's position on his 420 seal and its analogues. They disagree with Marshall on almost every point, including the possible presence of a

phallus, the three faces, and the bull horns. Apart from usual polemics, thoughtful objections have been periodically expressed and a wide range of different identifications have been offered. Saletore in 1939 was one of the first to point out the difficulties in



A Kot Diji pot (Early Indus phase) with buffalo horns motif



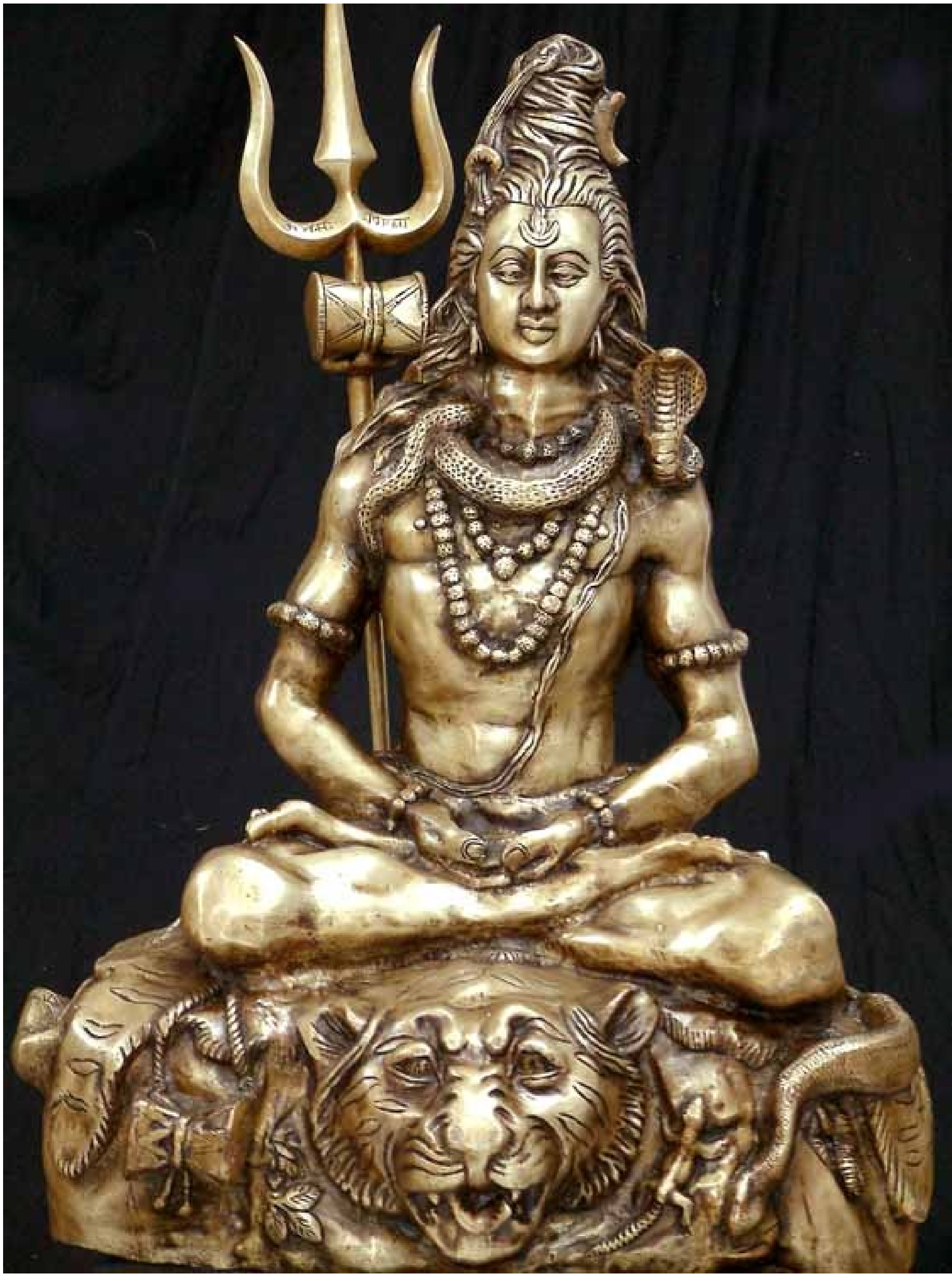
Reverse of a terracotta tablet from Harappa. A number of examples of this impression have been found at Harappa, all made from the same mold.



Horned deities, such as the Horned Celtic Corniness, sitting in quasi Yogic posture, was worshipped in parts of ancient Europe.

assigning later Hinduistic ideas to a prehistoric seal. He considered the seal's figure to have three faces and a headdress consisting of *three* horns (two sideways and one in the middle). He related these attributes to the Vedic god Agni, who indeed is described as having "three heads" and whose flames are his "horns" (16). Almost immediately, this view was opposed by a series of articles reverting back to aspects of Marshall's original position. Next, Chaudhuri (17) reviewed the seals's

iconography in his study on the Indus Civilization and raised significant doubts regarding the portoSiva attribution by noting that: (a) the features Marshall isolates are not associated with Siva until the Epics and Puranas (a time gap of at least two thousand years!) and that (b) except for the trident, these features are not very common in the iconography of Siva. In any case, Chaudhuri was doubtful of Marshall's trident theory, which requires accepting not only that the form of the headdress could evolve into Th.at of the trident, but also that a headgear could be the source of an emblem held in the hand.



A modern rendering of Siva, the *Mahayogi*

Nilakanta Sastri (18) questioned the tricephalic feature. He maintained that “the god is neither threefaced nor even human faced. His whole form, though apparently human, is cunningly contrived to be a combination of various animals. A proposal to conceive of the figure as female was advanced by Sullivan (19). Sullivan’s reasons for viewing the figure as female are: (a) no evidence of a phallus, what appears

to be an erect phallus even Marshall conceded could be in reality the end of the waistband. (b) the presence of a waistband, which is associated with female figurines, whereas males, the author maintains, are always nude. Furthermore, the arm bangles and necklaces worn by the figure are jewelry which lavishly adorns the female figure in Harappan art; (c) a headdress matching that of a tree goddess, discussed above. He pointed out that there are no other tricephalic images in Harappan art. Sullivan concludes: “All in all, there seems to be no positive evidence for the figure’s being male

but considerable suggestion for its being female” (19). Atre is another one who vigorously argues that the personage on the seal is not male but female (20,21).

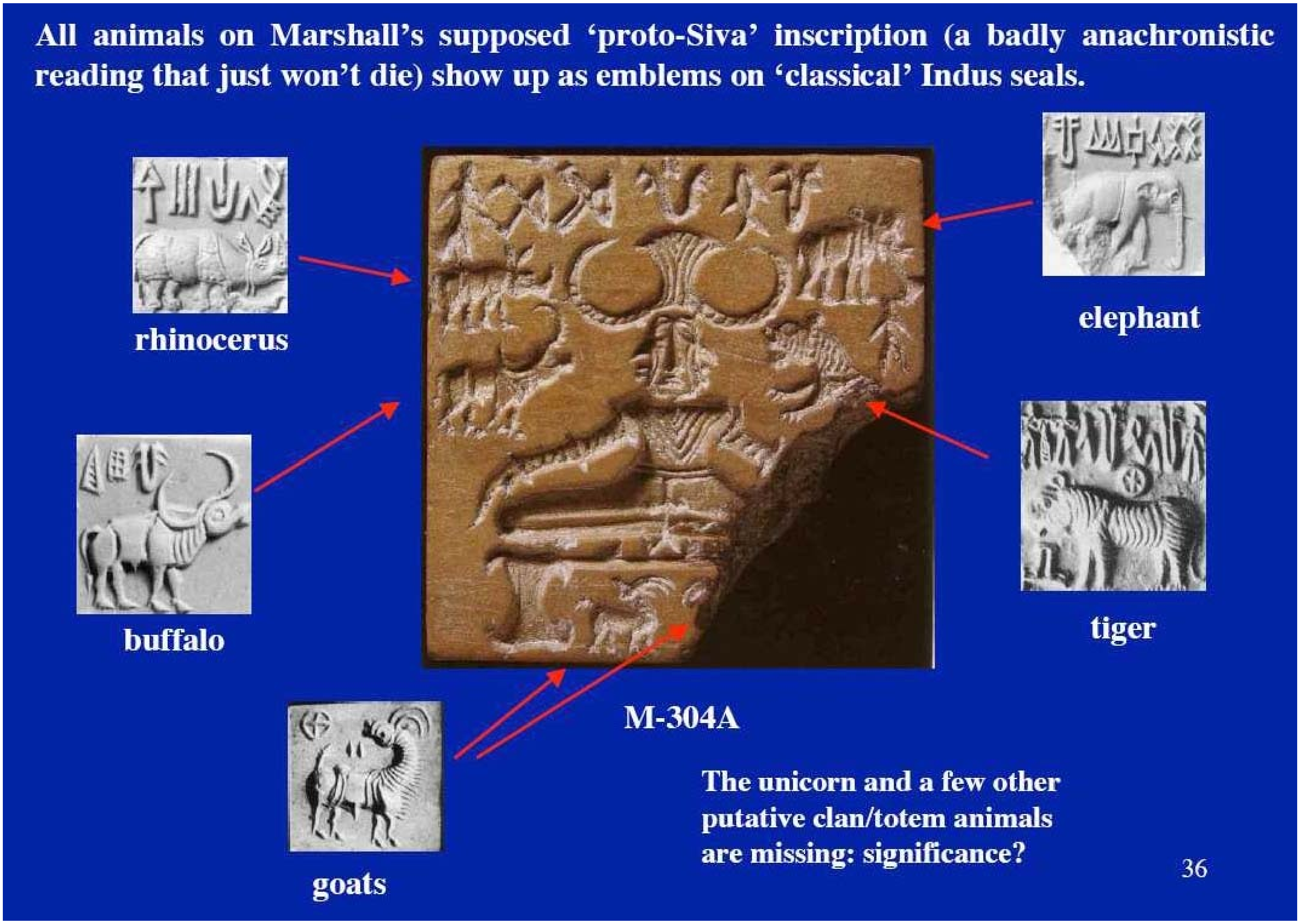
Sullivan also disputes other evidence that Marshall offered in support of his proto-Siva god: “In addition to the proto-Siva seal, there are three other items which Marshall regarded as substantiating his supposition that the worship of Siva or at least his prototype is found in the Harappan Civilization, namely: phallic symbols suggestive of the *Siva-linga*; the apparent worship of the bull and the historic association of the bull with Siva; and the trident headdress of the deities as the origin of Siva’s trident” (19). “It is impossible to say just how many of the phallus-like stones found at the Indus sites were actually *lingas* and even if it could be safely assumed that ‘phallus worship’ was part of the Harappan religion, this would not argue for the cult of prototypal Siva. Indeed the association of the *linga* with Rudra-Siva appears quite late in the development of the cult, for it does not occur in the Vedic literature and evidently had not yet become a cult symbol by the time of Patanjali (second century BC). In fact, the earliest known *Siva-lingas* are datable from the first century BC. When the RudraSiva cult did acquire the *linga* symbol from the nonAryan phallus worshippers mentioned in the RgVeda, it was incorporated into a philosophy which greatly devoided it of its original sexual or phallic significance” (19). Sullivan concludes: “It would appear, then that the ‘proto-Siva’ hypothesis is founded upon ambiguous and inconclusive evidence and that there is no positive basis for asserting the presence in the Indus religion of Siva or its prototype. It is possible, however, that the ‘protoSiva’ and other seals may offer further evidence of the cult of the Great Goddess in Harappan culture” (19).

Sullivan also brought the figure’s posture into dispute, proclaiming that it was nothing but a recent myth. Agreeing with Sullivan’s position, Shereen Ratnagar (7) points to the association of Siva with yoga to be of relatively late phenomenon and its association with asceticism to be in the late Puranas of the early first millennium AD at best. She confirms that the Brahmins conceived of Siva as a yogi in the ithyphallic posture during a process in which the *linga*-worship of non-Brahmanic practice was being absorbed in Hinduism. Ratnagar points out that the Siva is not evidenced iconographically until about the second century BC. Vedic religion was distanced from *linga* worship, it did not know of the Siva, and in the Vedas it was *Prajapati* and not the ‘male principle’ who was the Creator. Thus, “.... the iconography of the Indus Valley has nothing to do with Siva, nor the phallus worship supposedly evidenced from any pro-Siva iconography of the Harappan Civilization” (7).

“........ it is a god because it looks like a god!”

(Gregory L. Possehl)

In RgVeda, the Vedic god with Siva's powers was Rudra, who possessed vigor and the ability to punish. He is something of an ascetic and a controller of destinies. In time Rudra and the new god Siva became one. But the association of the figure with Vedic god Rudra, if not the Hindu god Shiva, has also been challenged. Mashall claimed that ‘in the Vedic hymns *pasu* signified a beast of the jungle'. For this statement he cited Macdonell and Keith's *Vedic Index* as the supporting authority. However, Macdonell and Keith's say no such thing. According to Bhandarkar (1837-1925) Vedic *Pasupati* is essentially Rudra, destroyer of grazing cattle. This deity, clad like a tribesman in skins and armed with a bow and arrows, is beseeched to refrain from killing cattle and when he turns protector of livestock people call him 'Pasupa'. In subsequent Vedic literature also Rudra, as *Pasupati*, does not protect wild animals, and his predominant trait with respect to all wild animals is wrath, rather than protection. In the *Yajurveda*, Pasupati dwells



The animals surrounding the central figure are generally considered to be clan or totem symbols. But they may as well be the animal spirits with which the central figure (a sha

The buffalo horn headdress is especially important, given the other cultural contexts for this imagery. Also, the figure is not intelligibly human; there is even a slight chance that it is three-faced. According to Possehl, there is ultimately no proof for the contention that this figure is a god, but "the look of the figure elicits an irresistible conclusion for me - it is a god because it looks like a god!"

man ?) is in communication.

away from human habitation, is 'in leaves and the falling of leaves' and is the lord of the forest, and trees and, again, the lord of cattle. So, too, in the *Atharvaveda*, Rudra as Pasupati is associated with people, cattle, goats, sheep and horses, as both Bhandarkar and Griffith make it clear. There is thus no case for *Pasupati* as tamer or protector of wild, dangerous beasts of the dense forest like the elephant, tiger and rhinoceros.

There is considerable merit in the contemporary critique of Marshall's hypothesis on the Proto-Siva seal and similar Harappan iconography. It seems that Marshall has probably taken his thought on the significance of this figure one or two steps too far. Still, there are a number of scholarly adherents to the Marshall's principal position in the academic world. Possehl proposes (11), for instance, that there is something significant about Seal 420 and other objects with similar figures, and it would be wrong to abandon the idea that in the Proto-Siva seal we have an insight into the Harappan system of belief

leading to later Hindu tradition in India. In his opinion, the pose, demeanor, and dress of the figure all combine to suggest that the central figure on seal 420 is a god of some sort. In defending the Marshall's hypothesis, Possehl argues the posture of the central figure on Seal 420, and the other seals and tablets like it, is clearly not "naturalistic" as claimed by some commentators. He asks: who sits "naturally" with their heels together? ---"only someone who has practiced the art sufficiently for it to have become cultural, a non-biological adaptation. The structural biology of humans is not such that we take to such a position naturally". He concludes that the pose is the same as one used in yoga and can be taken as early documentation of a tradition of physical and mental discipline that emerges

as yoga in the first millennium B.C.

These comments are well taken: the practice of yoga may have originated in the Indus Valley (although it has been shown conclusively that it is not) but should we equate a *yogi* with Siva, or even a demi-god? Could not a mere shaman by seated in this position and transcendent into the world of animal spirits to see the future or seek the remedy for a disease? A host of Muslim *peers* (the modern day shamans) in Pakistan and Afghanistan sit in a peculiarly unnatural posture to slip into a trance, into 'a world beyond the universe'. Of course, none of them calim to be practicing yoga or being a god. The rural shoemaker, that is the traditional *mochi* of Pakistan oftent sits in a position that is something very similar to the posture of the personage of the Seal 420 but no one assumes that he is practicing yoga or is trying to be a god.

Headdresses mimicking the heads of birds and animals have been a standard paraphernalia for the 'medicine men' among the American Indians and among some bands of the Eskimos. Horned headdresses have also been used by the shamans of the Celtic peoples and the wearing of the fullsized headdresses with actual horns has been a common practice among the hunters of the Muria communities in Central India. The widespread use of horned headdresses in various cultures goes to show that it was not particular to the Indus Valley and that it had nothing to do with religious beliefs and rituals. In all probability, these horned headdresses were either a part of the paraphernalia of a shaman or an insignia of nobility, valor, or simple vanity. During-Caspers (22) subscribes to the former opinion; she considers them a representation



"Priest King" of Mohenjodaro.

Ramaprasad Chanda sees in him a "yogi" - concentrating on his nose in yogic meditation

of hunting magic and concomitant sorcery still being practiced at the height of the Indus Valley Civilization. She points out that on most of these seals the squatting figure is depicted on a pedestal or a dais with legs, which in four out of the six representations end in hooves with

well-delineated fetlocks.

Marshall's case for the Harappan prototype of Siva was

largely built upon a single seal and a superficial reading of Indian tradition, especially that of the developments in Hinduism. There is, therefore, no positive basis for asserting the presence in the Indus religion of Siva or his porto-type.

Places of Worship and Sacrifices: Places of worship and offering sacrifices to gods, goddesses and other deities have played a major part in all societies, and religious structures are generally a prominent feature of emerging civilizations. Each culture has its own distinctive form of shrines or temples, but in general it is possible to recognize religious buildings and to distinguish them from domestic architecture. Even in simpler societies, temples and shrines can often be identified on the basis of differences from domestic structures in their form, internal layout, and contents. Attempts to find such clues in the Indus Civilization, however, have met with only limited success; few structures suggest a religious function, and these differ from place to place, a strange contrast to the cultural uniformity indicated by so many other aspects of the Indus Civilization.

The temples and pyramids of Dynastic Egypt and the *ziggurats* of Mesopotamia have no parallel in the Indus Valley and as yet no temple or house of worship that can be positively identified as a sacred precinct has been found. Constructing these kinds of huge, physical monuments to their gods and goddesses was apparently inappropriate to their belief systems. There can be little doubt, given the large urban centers, that the capability in both engineering skills and the ability to mobilize a workforce - was there to build such edifices. That this was not done is an important element in understanding the nature of this civilization and the role of organized religion in its mass culture.

The search for a religion, centered around a grand city temple, has been intense, to the extent that Wheeler referred to "the pious hope", often repeated but entirely without an archaeological basis, that a temple may underlie the stupa on the Mound of the Great Bath at Mohenjo-daro. Mackay was the most outspoken proponent of this idea, and in his popular book on the Indus Civilization, he said: "When further exactations are made on this site, the axiom will probably once more prove true that once a site becomes sacred it remains so, even to the followers of other religions who may occupy it later" (23). This is a good idea and one that is often true, but we have reason to believe that it may not be true at Mohenjo-daro. So far as can be judged from the plans and sections of the buildings exposed around the stupa, there is nothing that sets the area apart from the rest of the city. There are well-paved rooms and courtyards, bathrooms, drains, water-chutes, and the like - all well made though not better made than in some other buildings, and all seemingly in conformity with the standard patterns, but with no features out of the common. The prevailing view is that a detailed examination of excavation records shows that there has been sufficient digging around the stupa to ensure that there is no large building under it, an observation corroborated by Jansen (24). This hypothesis gains strength from the fact that no Indus temple or house of worship has been uncovered anywhere else either.

Based on the available archaeological evidence, the Harappan religious system appears less like the Mesopotamian, with its scores of buttressed-and-recessed temples with cult statues, libation places, and offering benches, than the religion of Bronze Age China, or for that matter Bronze Age Crete where there were no Minoan temples but where the gods manifested themselves temporarily, as epiphanies, on mountain top shrines or in trees. Harappan sacred places could have been open-air cult centers, caves, sacrificial platforms which are replicable, household shrines, or sacred trees in which

deities revealed themselves to people, but no fixture such as a royal memorial (like the Egyptian pyramid) or institutionalized house of a great god. These speculations are, however, out-of-place because we are not sure if the Harappans believed in discrete and personified gods and goddesses, for the glorification of which one needed a fixed or sacred worship place? In fact, the temples, houses of worship, and tombs of their dead ’lords’ so prevalent in almost all Bronze Age civilizations but so conspicuous by their absence in the Indus Valley, indicates the reverse, that is, an absence of the concept of communal gods and goddesses in the Harappan society. Alternatively, the Harappan religion must be very personal with very little communal participation.



A reconstructed ziggurat in southern Mesopotamia Wherever there are gods, there are the temples to worship them

The absence of religious structures during the urban phase of the Indus Civilization has been explained by Atre on ethnographic reasons (20). He points out the humble appearance of shrines in modern Indian villages, differing little from domestic huts. It is also worth noting that substantial temples do not feature in the early part of India's historical period and that, when rock-cut temples began to appear, the architectural detail shows that they were modeled on wooden structures. Worship was often focused on sacred objects, such as trees, pillars, or relic mounds, sometimes enclosed in shrines. Practices associated with such venues included the offering of fruit, flowers, or other things, as well as walking around the sacred object in a clock-wise direction *(pradakshina)*. In addition, religious practices could involve contemplation, or they could involve listening to sermons within a pillared hall. Therefore, we should not be looking for temples as such in the Harappan state, or, at least, not for imposing structures.

The presence or absence of temples have a secular aspect also. The house of a god can serve to tie a community to a place. Earthbound deities with permanent houses in towns or villages require service. If a ruler builds a temple in a certain place, which then becomes a center of worship for the local people and for pilgrims from elsewhere, the ruler establishes a particular relationship with a residential community and a locality. A deity comes to be associated with a locality. So, too, certain rituals come to be rooted in certain spaces and it becomes difficult to relocate a sacred space and its associated rituals.The religious valorization of a space contributes substantially to community feeling

among residents. It could be said that if temples mean earthbound deities, they also mean rooted, bounded people. It is also said that those villages and cities are more liable to uprooting and desertion whose social bonds are comparatively weak. Ratnagar (7) suggests that the absence of the institution of the temple was one factor that made village desertions at the end of the Harappan period that much easier - there was less bonding of a people to a place and to one another.

Concluding Remarks: On the basis of the findings of terracotta female figurines and certain steatite seals from Mohenjo-daro and Harappa, Sir John Marshall asserted that the Hardpans probably worshipped a Mother Goddess and the cult of Siva could be traced back to pre-Vedic Harappan beginnings. Marshall's interpretation of the religion of the Harappan Civilization has been accepted almost universally and had greatly influenced scholarly understanding of the historical development of Hinduism. Some later archaeologists, however felt compelled to question whether the archaeological evidence fully supports all of Marshall's hypothesis and wether there might be other equally, or even more, plausible interpretations of some of the finds. In this chapter we have reviewed these thoughts in some details. The question of Hinduism having its roots in the Harappan Civilization has further been discussed in the last chapter of this section.

Gods and goddesses are an invention of agricultural and pastoral societies, so are the elaborate mythologies. As the Harappan Civilization was predominantly an argo-pastoral society, we expect to observe a significant presence of gods and goddesses in the systems of religious beliefs and practices, but surprisingly they are not as prevalent in the Harappan society as they are, for example, in Mesopotamian, Egyptian, Mayan, and Inca cultures. Instead, the indications are that the Harappan religion had a strong component of earlt Neolithic and late Paleolithic beliefs: shamanism, hunting and fertility cults, and extensive use of protective charms and amulets, for example. In spite of a current emphasis on this aspect of the Harappan religion, however, we cannot escape the strong possibility that the Harappan people probably did worship a few deities who had strong relationship with animals and vegetation and thus embedded in the hunting-gathering and agricultural culture of the society. It is also clear that these deities were offered animal sacrifices and libations. As far as it being a porto-Siva, or any connection with any deity of classical Hinduism, there is no evidence for it.

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Chapter II.3.

The World of Mythology, Cults, Rituals, Symbolism, and the Sacred



In the foregoing two chapters we have talked about the Harappan gods and goddesses, tried to

dig out evidence for their various cults, discussed some aspects of their rituals, and reviewed their concept of the sacred. In all of this, the temples for their gods and goddesses, as they are the characteristics of so many early civilizations, are sorely missing. There are no visible shrines and there are no obvious places for offering their sacrifices. Although a number of buildings both on the citadel and in the lower town at Mohenjo-daro have been tentatively called temples, and the stone statuary associated with these buildings has been referred to as cultic icons, their interpretations are highly speculative. The absence of such structures tend to bring down the whole edifice of gods and goddesses which form the basis of this interpretive structure.

“Religions are all alike - founded upon fables and mythologies.”

Thomas Jefferson

If the world of gods and goddesses was not the world of the Harappans, then on what elements did their ‘religion’ based? Animism, shamanism; mythology, a diffused concept of the sacred and the profane, and a fluid beliefs in abstract symbolism, along with the practices of some ill-defined cults and nature-worship rituals, and burying rites of the dead, have been shown to be the religion of simple societies. The Harappan Civilization might be one of them.

We reserve the next chapter for the discussion on the general beliefs of the Harappans on diverse spirits and the role of the shamans; here we focus on some other possibilities. Since no written accounts are available, our evidence exclusively comes from the Harappan seals and tablets; the figurines give us no guidance in this but a few artifacts do furnish us with some peripheral indications. The evidence is obviously scanty and the conclusions drawn are only indirect. Thus, any discussion of these matter would be largely speculative.

Indus Mythology: The term "mythology" refers to a body or collection of sacred narratives. They convey religious or idealized experience, to establish behavioral models, and to teach. The main characters in myths are usually gods, goddesses, supernatural heroes and humans. As saIn view of this missing link, a number of

scholars have recently gravitated to a reconstruction of the Indus religion that is not based on any organized religious system that revolved around a belief in gods, goddesses in parallel with those of Mesopotamia, Egypt, and other early civilizations. If the Harappan could erect magnificent residential houses, water storage tanks, and warehouses, they were surely able to erect temples for worshiping

their deities, construct the shrines to honor their deities, and build tombs for their heroes. The fact that they did not, indicates a possible absence of such beliefs, and since such beliefs were universal in most of the Bronze Age civilizations, it follows that in the Indus Civilization there appear to be no clear indications of intellectual behavior or a well-delineated level of religious or theocratic presence. This places emphasis on phenomena which suggest the continuance of a less sophisticated substratum of religious beliefs and practices.

Well, religion has been passed down through the years by stories people tell around the campfire. Stories about God, stories about love. Stories about good spirits and evil spirits (*Andrew Greeley*)

cred stories, myths are often endorsed by rulers and priests and are lcosely linked to religion or spirituality. In the society in which it is told, a myth is usually regarded as a true account of the remote past. Mythology is, therefore, an important part of every religion. Ancient peoples used a highly symbolic vocabulary in both literature and imagery to represent association of gods with specific natural phenomena. Because people viewed humans, nature, and supernatural beings as part of a single universe (in contrast to a dichotomous one in which humans and animals were opposites), gods and goddesses were often

represented as half human and half animal or were associated with specific plants and animals.

The iconography of representing animals as powerful spirits finds frequent reference in the religious tradition of almost all primitive religions. Perhaps the most familiar instance is the Golden Cow, to the worship of which the children of Israel reverted when Moses departed for Mount Sinai to talk to his God. The goddess Epona, whose name, meaning “Divine Horse” or “Horse Goddess,” epitomizes the religious dimension among the Celtic peoples, was adopted by the Roman cavalry and spread throughout much of Europe, even to Rome itself. In Chinese iconography, dragons are frequently depicted as celestial spirits.

It is certain that there must have been several myths of one kind or another that were known widely among the masses of the Indus Valley and some of them must have religious connotations.



An Indus tablet from Mohenjo-daro, depicting a man fighting with two felines in the manner of the Gilgamesh tale of Mesopotamia

We know about the existence of these myths of the Indus people from some of their carved seals and tablets. Several examples of mythical scenes are found depicted on steatite seals and molded terracotta tablets; we do not know their meanings or know the stories they depict but they do provide us ample material to speculate on. Apparently, there are several subjects, of which these narratives are composed of, but one subject that stands out in all of



Man fighting a water buffalo while a honed deity watches. The horned head-dress has a branch with thee prongs or leaves. The tablet was found at Harappa. The

reverse side of this seal depicts the "Giulgamresh" scene, reproduced in the previous figure.

them is animals - real or imagined.

The struggle between wild animals and humans is graphically illustrated in a magnificent terracotta tablet discovered in 1995 from Mound ET at Harappa. On one side the tablet has a narrative motif showing a figure grasping two felines,

**A Harappan tablet, probably depicting a shaman communicating with the wild animals of the forest**



The impression of a cylinder seal from Kalibangan, depicting two men fighting over a woman while a zoomorphic creature with human head looks on.

probably tigers, and standing above an elephant. On the reverse of the same tablet is a narrative scene depicting the killing of a water buffalo. A person, possibly a man, with hair tied in a bun on the back of the head, impales a water buffalo with a barbed spear. The hunter's foot presses down the water buffalo's head as he thrusts the spear into its shoulder. Some archaeologists have interpreted this scene as a water buffalo sacrifice,

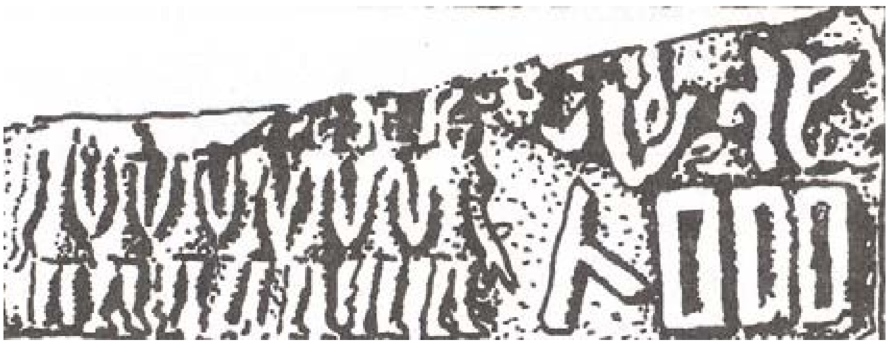

AZ hi t ithh

A Zoomorphic creature, with human figure but with animal head, hoofed legs and tail, fighting a wild animal, probably a lion, depicted on

an Indus tablet. This could as well be depiction of a shaman, attacking a hypothetical zoomorphic animal in the spirt world



Seven human figures, a goat (or deer) and two birds, depicted on a Harappan seal



Indus iconograph with seven human figures, depicted on a molded terracotta tablet

which is taking place in the presence of a priest seated in ’yogic’ position. They draw parallel with the water buffalo sacrifice among the Durga cult of later times in India. These researchers, however, seem to be reading too much in the scene: Similar scenes of an individual spearing a water buffalo have been found on other terracotta tablets from both Harappa and Mohenjo-daro, and it could as well represent a hunting story of some legendary or mythical proportion. In others, a tiger is attacked by an individual with a bull's head. In some scenes a stick figure sits in a *neem* tree, watched by a prowling tiger looking back over its shoulder. The figure balances on the tree branch with its legs in a similar posture to that of the stone sculptures, squatting on the heels with one knee raised; it is slender, wears neither clothes nor jewelry, and is apparently genderless. It seems that bovids and tigers, magnificent and powerful creatures, played a major and balancing role in the iconography of the Indus civilization, both individually and in combination.

One famous example is a cylinder seal from the site of Kalibangan. On this seal two men appear to be fighting over a woman, with long braided hair and bangles on each arm, wearing a long skirt. While trying to spear each other, the men grab the woman's hands, and their spears form an arch over her head. In the background what may be a female deity or a zoomorphic spirit with the body of a tiger and the horns of a *markhor* goat watches. The deity's arms are covered with numerous bangles, and she has long streaming hair. In front of the deity is a tree without leaves; behind her is a tree covered with leaves.

A single sign of three strokes appears in front of the deity's face. Both men are dressed in the same manner, suggesting they are from the same ethnic group, so it is clearly not a battle to protect a woman from an outside raider. Perhaps the deity is protecting a queen or princess as the hero rescues her from a local opponent. The theme of two men fighting over a woman is not unique to the Indus culture, but the human-tiger-markhor ‘deity’ or zoomorphic spirit watching the scene suggests a mythic dimension.

Additional series of narrative scenes provide further insight into the stories of human conflicts with animals and probably indicate to some religious beliefs. Kenoyer found several narrative sequences on molded faience tablets at Harappa; some consists of three different scenes and one line of text, other related tablets are two sided and only reveal one segment of the narrative and the text. An interesting seal from Chanhudaro is where a bull is ravaging a naked female, to be described shortly.

Some of the themes appearing on Indus seals and tablets have parallels in Mesopotamian mythology of the Gilgamesh epic. For instance, a seal from Mohenjodaro, reproduced below, shows a halfhuman half-bull figure attacking a horned tiger. This Indus seal may be construed as portraying the story of the Mesopotamian goddess Aruru, who created Ebani or Enkida as a bull-man monster to do combat with Gilgamesh, but who ultimately became his ally and fought with Gilgamesh against the wild animals. Similarly, the Indus seals and tablets depicting a figure strangling two tigers with bare hands, depicted above, have a striking similarity with motifs found in the iconography of Mesopotamia which show lions being strangled or otherwise molested by a hero of Gilgamesh type. The presence of this theme in objects associated with the Indus Civilization as well as with Mesopotamia is perfectly in keeping with the notion that the Indus region and Mesopotamia were in contact with one another. That some aspects of Mesopotamian religion and mythology would have been accepted by the Indus peoples and vice versa is a reasonable proposition at face value, given the many historical examples of this sort of cultural exchange around the world.

There are strong indications that the popular mythical stories were not only being depicted on Indus seals and tablets but they were also acted in theatrical shows for the entertainment of the masses. Several masks of this nature have been discovered at Mohenjo-daro and Harappa. The widespread depiction of these mythical scenes and the large number of toys and masks related to these myths clearly indicate that



In this Sumerian representation Gilgamesh is holding two lions by their hind legs

and riding on the back of two lion kings

they were very common indeed and that they may as well have some religious significance.

When consideration is given in this connection to the conservative element in primitive religions, it is not surprising to find that the growth of religious myths was not so spontaneous in early civilizations as has hitherto been assumed. It seems clear that in each great local mythology we have to deal, in the first place, not with symbolized ideas so much as symbolized folk beliefs of remote antiquity and, to a certain degree, of common inheritance. It may not be found possible to arrive at a conclusive solution of the most widespread, and therefore the most ancient folk myths, such as, for instance, the Gilgamesh. Nor, perhaps, is it necessary that we should concern ourselves greatly regarding the origin of the idea of the hero, which in one country symbolized fiery drought and in another overwhelming river floods.

Some archaeologists insist that the Harappans had zoomorphism as an integral part of their religion.They point out to the Indus seals of which almost three-quarters carry the represen



A typical retention of a unicorn on the Harappan seals

tation of animas. It is thought that almost all of these creatures are the product of the prevailing mythologies, most of which had religious undertones. The most common of the animals pictured on these seals (on 1,1500 out of 1,524 seals showing animals) is a mythical one, a unicorn. It is depicted on some copper amulets also. It is a humpless bull with a single long horn jutting forward from the forehead, always shown with a curiously shaped three-tiered 'manger' in front of it. Far less frequently are to be found the humpless bull or bison (95 seals), elephant (55), *zebu* or humped bull (54), tiger (21), hare (15) and buffalo (14).

The religious significance of ani mals depicted on the Indus seals and amu lets is, however, not clear. But judging from other ancient societies elsewhere, one can not escape the con



clusion that the depic
tion of some particular
animals must have
some basis in the re
ligious beliefs of the
masses. Examples of

A stylistic representation of horned headdress with pipal tree sprouting from

the middle, from Mohenjo-daro

the religious beliefs
based on the relations
that existed between
humans and animals
on which the human
depended for food,
furs, and hides
abound in the ancient
history of many peo



ples. Quite frequently,

these relationships **A tiger with horns, de**have been elevated to **picted on an Indus seal** a status of high es teem for the animal; the elevated status of the cow in Hindu relig ion being a case in point. Among some of the North American Indian bands, each family had a particular animal as its emblem, personal names were



often derived from

these animals, and **A composite animal with** descent was claimed **three heads**either directly from the

animal or from legen dary ancestors asso ciated with it. It is, therefore, likely that these animals were seen by the Harap pans as embodiment of zoomorphic deities whose protection the seal-owners wished to



invoke. The pictured

animals might equally **An Indus seal showing a** represent the totems **composite animal with a** of the lineages or **tiger's body and human**

clans of the seal**front**
owners and this could
well be precisely be
cause these animals were the zoomorphic forms of the clan's respective deities.

Compared to simple representations of animals, the portrayals of composite animals on seals and tablets are much more significant in context with the subject under discussion. There are some animals with three heads on one body; or tigers entwined; tigers with horns; unicorns with elephant trunks; and unicorns growing out of trees. Naushahro has the only terracotta figurines of multiple-headed animals but such representations are found on seals from the larger sites. One square seal from Mohenjo-daro shows a tripleheaded combination of important totemic animals: the bull, the unicorn and the antelope. In another variation, multiple creatures are combined into a single animal. The rounded human face has an elephant's trunk and a draping beard or tusk. A pair of inward curving ribbed horns rise above the head and a heavy mane like that on large markhore goats hangs from the neck. The front hooves and genitalia are similar to those on bull and unicorn figures, but the back feet and haunches are that of a striped tiger. Finally, the tail is depicted as an upraised cobra. No ritual offering stand is pictured on this seal, but four script signs are written above the back of the creature.

Indus iconography depicts humans and animals as distinct entities. Many figurines, and a few tablets, however, portray combined human and animal form. Some figures have human heads and animal bodies; others have animal heads and human bodies. A tiger with a man's bearded head contrasts with a seated catlike animal with a woman's head. Human torsos on four-legged bodies of real or imaginary animals make their appearance. A famous cylinder seal from Mohenjo-daro depicts a scene that is being watched by a composite human-animal deity. The body is that of a *markhore* goat

whose neck extends to become a human torso. This humananimal creature, however, has the head of a tiger. The motif of the human-tiger-markhore deity was discovered on another seal from Kalibangan, and on a seal from the site of Nausharo, but no examples have been discovered at the larger urban centers.

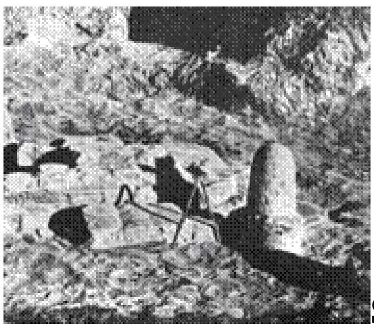
The singularity of the humans portrayed on the seals, the 'sealing amulets' and the copper platelets, or fashioned in clay, is revealed by the addition of horns, bulls' ears, hooves and bulls' tails. There are also human figures, so far found exclusively at Moenjo-daro which are engraved with a burin on a number of small, flat copper platelets or amulets. They wear horned animal masks and garments suggestive of having been made of leaves, pelts, hides or fleece or even a kind of camouflage. Humans adorned in this elaborate animal-like outfit, invariably carry what has been described as bows and arrows. We have selected these examples to support the contention for the existence of religious practices and/or cultic performances in Harappan times. The iconography of animal-human, multianimal, and imaginary living being is not particular with the Indus Valley alone; the rich abundance of animal imagery in Celto-Roman iconography, representing the deities in combinations of animal and human forms, is well known as it echoes in the insular literary traditions of many lands. In the art of Bactria and Mesopotamia, such combination spirits can be associated with known myths wherein the specific animals represent special powers. Since the Indus iconography combines the most important totemic and plant motifs, one tends to think that they must be important symbols of Indus religious integration. On the other hand, these figures probably reflect the synthesis of many local powers under a single set of authority. It would be, however, hazardous to draw any specific conclusion without looking for corroborating evidence.

Some scholars insist on the religious connotation of composite animals. They even suggest that the mythology of composite animals in the Hindu religion of South India probably originated in the Harappan culture. The myth of *Ganesh*, a human child with elephant head is an example. This conjecture is, however, misplaced, as *Ganesh* appeared on the Indian scene long after the demise of the Harappan civilization. Other scholars, on the other hand, view the composite animals as chimera. A chimera is an imagined species cross so that the offspring is born with anatomical parts from both parents. For a hypothetical example, a horse and cow crossbred might produce an animal with a stallion’s head and body and a cow’s rump and milk bag. That is the kind of image that is created on the basis of the legends that have developed in many early cultures of the world. The Bible’s book of Genesis mentions that angels mixed with the corrupt daughters of men and produced monsters. Greek mythology is replete with monstrous images of supposed mixtures of gods and humans and humans with animals; often the story is of a Greek god in the body of an animal ravishing a human woman and in some cases the story even names the resulting monster and makes him into a hero or a villain.

Excavations of the Harappan sites have yielded many images on seals and tablets that show chimera. The Indus culture seems to have entertained the idea of such crossbreds and they took their artistic expression of such creatures to a high degree. There may be a natural explanation of the Indus people’s interest in crossbreds, because their predecessors in that region domesticated the wild animals and were the pioneers in animal husbandry in the region. And to their eyes, the resulting offspring indeed resembles both the ancient parents of the new grass-eating domestic animal. The moufflon is an intermediate stage of the domestication process perhaps. A seal from Chanhu-daro shows a bull ravaging a woman. Another seal shows a bull with woman’s head. The Indus people of the Bronze Age were not alone in this quest; Victor Sarianidi describes in Central Asia a human male with a birdlike head and wings (12).

Cults and Rituals: In popular usage the word cult usually refers to beliefs or practices that are considered abnormal or bizarre. Of course, we do not take this meaning in context with the Harappan religion because we do not know what was normal and mainstream and what was abnormal and bizarre. The word originally denoted a system of ritual practices and it is in this sense we can discuss some aspects of the Indus cults. A ritual is a set of actions, performed mainly for their symbolic value. It may be prescribed by the traditions of a community, including a religious community. A ritual may be performed on specific occasions, or at the discretion of individuals or communities. It may be performed by a single individual, by a group, or by the entire community; in arbitrary places, or in places especially reserved for it; either in public, in private, or before specific people and deities.

Rituals of various kinds are a feature of almost all known human societies, past or present. In early societies they mainly consisted of the various worship rites, atonement and purification rites. In religion, a ritual can comprise the prescribed outward forms of performing the *cul*


Some scholars see the *linga* worship in the Indus religion. Again, you see what you want to see.

tus , or cult, of a particular observation within a religion. Although ritual is often used in context with worship performed in a temple, the actual relationship between any religion's doctrine and its ritual(s) can vary considerably from organized religion to non-institutionalized religion, such as discussed here. Rituals often have a close connection with reverence, thus a ritual in many cases expresses reverence for a deity, a spirit, a river, a tree, etc. Quite a few cults with their particular rituals have been identified by archaeologists in the Harappan societies through a close examination of the Indus seals and tablets. Three most important ones are (a) the fertility cults, (b) the hunting cults and rituals, and (c) the purification cult and ritual.

The Fertility Cults and Rituals: The act of procreation is a major theme in all ancient religions and is an important feature of some modern religions as well. Fertility cults abound in all early civilizations. These cults were most common


Gaur ravaging a female on Chanhu-daro seal number 13 (after Mackay)

among ancient agricultural societies who depended on the fertility of the earth for their livelihoods. Because the fertility of the land and livestock were often linked to the worship of specific deities and natural powers, different practices were in vogue in fertility rituals. The ancient peoples acknowledged the obvious parallels between man and earth and they attempted to invoke the systemic reproduction of the vegetation cycle by engaging in their own reproductive acts and symbols. Today, these old fertility rituals still rely upon the connections between human sexuality and nature to induce earthly fertility.

Male virility is represented in the nude male figurines and the male animal symbols on seals. As discussed in the preceding chapter, female figurines with accentuated breasts and hips are thought to represent mother goddesses, a symbol of reproduction in itself. Some objects found in the remains of the Harappan Civilization may represent female reproductive organs and several objects have been associated with the later-day *linga* worship. Terracotta tablets and inscribed objects show humans engaged in sexual intercourse, and others depict animals mating. These depictions imply that fertility cults were an integral part of the Indus belief systems.

Marshall suggested the possible existence in the Harappan iconographic repertoire of representations of the classic Indian male and female symbols, the *lingam* (phallus) and the *yoni* (vulva or womb), associated in more recent times with the worship of the god Siva. This suggestion is, however, not universally accepted as some of his examples have been shown to have other unrelated functions. For example, many supposed *lingams* may have been gaming counters or pestles. Elongated stones and terracotta objects found at some Harappan settlements in conjunction with hearths and fire pits have been shown to be bottom support for the earthen cooking pots. The *yoni* stone rings of Marshall have been shown more likely as column support in building construction. This is, however, not to deny the fact that the Harappans valued sexuality and there are several examples of it in their iconography.

One of the most controversial seals from Chanhu-daro shows a short-horned bull engaged in what some think is sexual intercourse with a human figure, presumably a female. This seal, described by Mackay and sketched above, shows a short–horned bull above a prostrate human figure. It looks as though the scene depicted an attack by the bull, and the human on the ground is attempting a defense against the trampling animal. Allchin explained, however, that the gaur is standing on his hind legs, slightly elevated above the human figure; its front legs are shown in excited motion. The bull’s erect

penis is shown in correct anatomical position. The figure below the gaur is less clearly shown and consequently more difficult to interpret. A headdress is seen to the far right bottom of the seal impression. Seen from Allchin's perspective, the scene is very dynamic; the bull is about to take a female in an act that might be seen as sexual violence, and yet the clear appearance of her open, exposed genitals tells us that she is a willing partner in this deed. Credence is given to this opinion by the Vedic practice of mating the primary queen with a dead horse in the horse sacrifice ritual in later times.

The intimate connection between sexuality and the sacred may strike some modern persons, particularly those living in Pakistan, as odd. For them, religion seems more involved in suppressing sexuality rather than encouraging and celebrating it. To understand the correlation of sex and divinity in the ancient world, we must appreciate several things about the way early humans viewed the world and their role in it. First, we must bear in mind that the reproductive process was the object of awe. How new human beings were produced by the sexual union of males and females was a fundamental mystery. The idea that new life was created by the merger of sperm and egg did not arise until the late eighteenth and early nineteenth centuries, little more than two centuries ago. That reproduction was controlled by powers beyond the reach of human beings was for millennia a reasonable assumption. Second, although the ancients thought that reproduction was governed by forces greater than themselves, they often believed it was necessary to cooperate with and assist these forces in certain ways. One of the functions of sacrifice, for example, was to provide the gods with the nourishment and raw materials (in the form of meat and blood) they required to produce (or reproduce) life. In this sense, the divine and human realms were dependent on each other.

Without going into discussion any further whether or not fertility cults existed within the broader definition of the Indus religion, two points need to be made here. First, there is indeed strong evidence that the Indus religion did value the importance of fertility and elements of procreation. Second, it would be a mistake to connect the fertility practices of modern Hinduism, especially that of the *linga* worship, to the Harappan society. These Hindu cults originated in South India and they did it long after the disappearance of the Harappan Civilization.

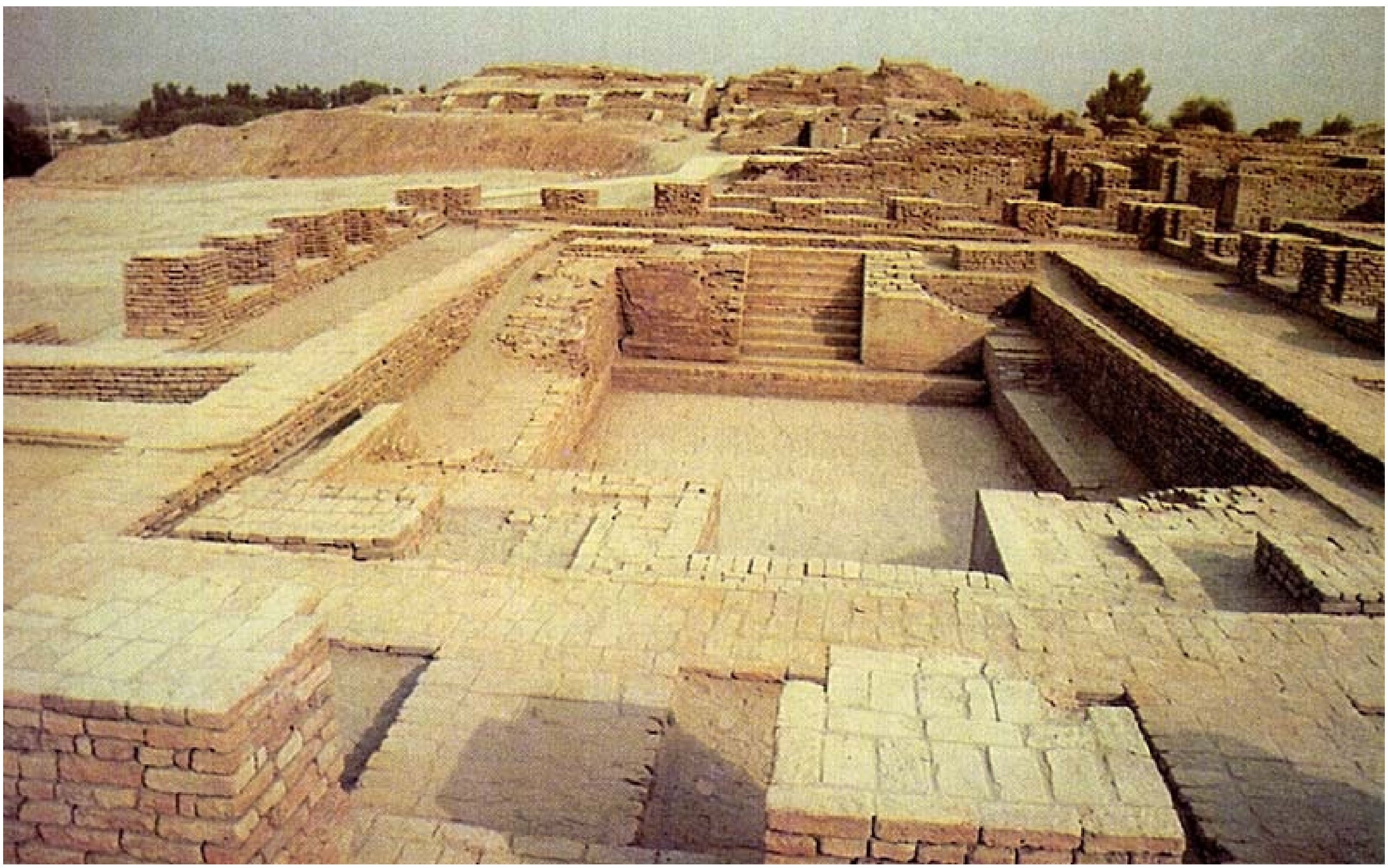
Hunting Cult: Hunting cult is a term used for practices of magic associated with hunting in hunter-gatherers cultures. It has been suggested that rituals associated with hunting magic are at the origin of religion in primitive societies. Paleolithic cave paintings have been interpreted as hunting magic, meant to increase the number of animals. In spite of great cities and a large number of lesser towns, the Harappan culture was primarily an agro-pastoral culture, with a strong element of hunting-gathering economy. It is this contention that gave rise to the suggestion that hunting cults were prevalent in the Harappan society. The evidence is, of course indirect.

There are human figures, so far found exclusively at Moenjo-daro, which are engraved with a burin on a number of small, flat copper platelets or amulets. They wear horned animal masks and garments suggestive of having been made of leaves, pelts, hides or fleece or even a kind of camouflage. Humans adorned in this elaborate animal-like outfit, invariably carry what has been described as bows and arrows. During Caspers (1) and Shereen Ratnagar (2) have selected these examples to support their contention for the existence of religious practices and/or cultic performances in Harappan times to enhance the results of hunting.

During Caspers (1) has suggested, although somewhat cautiously, that these hurrying figures of men

engraved on the thin copper platelets, with their heads completely shrouded by a short-horned bull-mask and torsos and thighs scored with inverted V's, wearing a long curling tail and carrying a bow in one hand and what may be construed as arrows in the other, are suggestive of the existence of an ancient hunting cult with rites and practices which may have become blurred with the passing of time. She also maintained that the original home of those who participated in these performances may have to be sought further to the North, in the remote areas of the Indus Civilization lying at a higher altitude than the Indus Valley lowlands. In these highlands the practice of hunting magic and sorcery attuned to the catching of game still existed (3).

The force of her argument that these copper platelets played a definite role in rituals and cultic practices hinges on two salient factors. First, these copper platelets differ from the other inscribed material discovered at Mohenjo-daro and other Indus sites. A short inscription, not very deeply engraved in positive figures on the obverse face, makes it quite obvious that the copper tablets were not used for stamping or sealing purposes and that the short inscriptions are to be read from right to left, in the way they have been engraved. They frequently show the same script symbols placed in the same order, possibly some magico-religious formula.



what is sacred, or holy. It often concerns what and how one eats, the kinds of clothes and ornamentation one wears, the flow of one’s bodily fluids, and the great mysteries of life: birth, sex, and death. What counts as pure and impure varies greatly from culture to culture and time to time. Observant Jews and Muslims regard pork as unclean, but others consider it a great delicacy. Traditional Christianity once considered childbirth to be an occasion requiring ritual purification, but most contemporary Christians no longer regard it as such. In some societies, including Hindu India, one may become ritually contaminated simply by coming into contact with someone who is impure.

We do not know what specific things the Indus dwellers regarded as ritually impure. Whatever the cause of impurity, the baths most likely served to remove contaminants and reinstate the order of things, just as public and private baths do in contemporary Hindu traditions. In modern India, the first religious act of the day for most Hindus is

The Great Bath at Mohenjodaro

Second, the animals which figure on the reverse not only differ considerably in technique from the mastery displayed in those carved on normal Indus Valley stamp seals, but the sketch ily drawn repertoire includes mythical beasts which do not appear on the seals. For instance, we encounter a horned elephant with a bull's tail, ram-like animals with laterally spread spiral shaped horns showing a well-delineated kidney design engraved on their bodies, bovine-tiger composites, two-headed yak-like creatures. Most interestingly, in a number of cases, hares bending over three twigs or saplings, replace the custom ary 'manger' accompanying the other animal rep resentations.

Ritual Purification: Ritual purification is a feature of many religions. The aim of these rituals is to remove specifically defined uncleanliness prior to a particular type of activity, and especially prior to the worship of a deity. This ritual unclean liness is not however identical with ordinary physical impurity, such as dirt stains; neverthe less, all body fluids are generally considered ritu ally unclean and some religions have special treatment of semen and menses which are viewed as particularly unclean.

In its most basic sense, ritual purity is the state of cleanness that is required for approaching



A water tank at Lothal, in Kutch

bathing, a ritual that brings the individual into the appropriate bodily and mental states for relating to the gods and persons. Today, many Hindu temples have tanks or reservoirs that function as ritual baths. Many natural bodies of water, such as the River Ganges, serve this purpose as well.

Marshall deals briefly with the importance of water to the Harppans (4): “Of the sanctity of water in the abstract, no tangible evidence has yet been found, but that water was held in great reverence and that it played a highly important part in the daily lives and religion of the citizens of Mohenjo-daro is demonstrated by the elaborate bathing establishment by the universal arrangements made in private houses for the supply of water and for baths. Indeed, it is safe to affirm that in no city of antiquity was so much attention paid to this matter of bathing as in Mohenjo-daro; and we can hardly believe that the practice would have been so ubiquitous and firmly rooted there,

had it not been regarded in the light of a religious duty. That such emphasis should have been laid on bathing – even at this remote age – will not come as a surprise to anyone familiar with the importance that from time immemorial the Indian has attached to ceremonial ablutions in sacred tanks, pools, and rivers” (4).

Wheeler (13) also found ‘water splendour’ an interesting and important feature of the Indus Civilization. In a section describing the city plan at Mohenjo-daro, he referred to the Great Bath as the site of public ritual ablutions known from Hinduism, describing the entire complex of the "cita



Bathing area in the interior of a house in Mohenjo-daro. Notice the outlet to the adjacent street drain

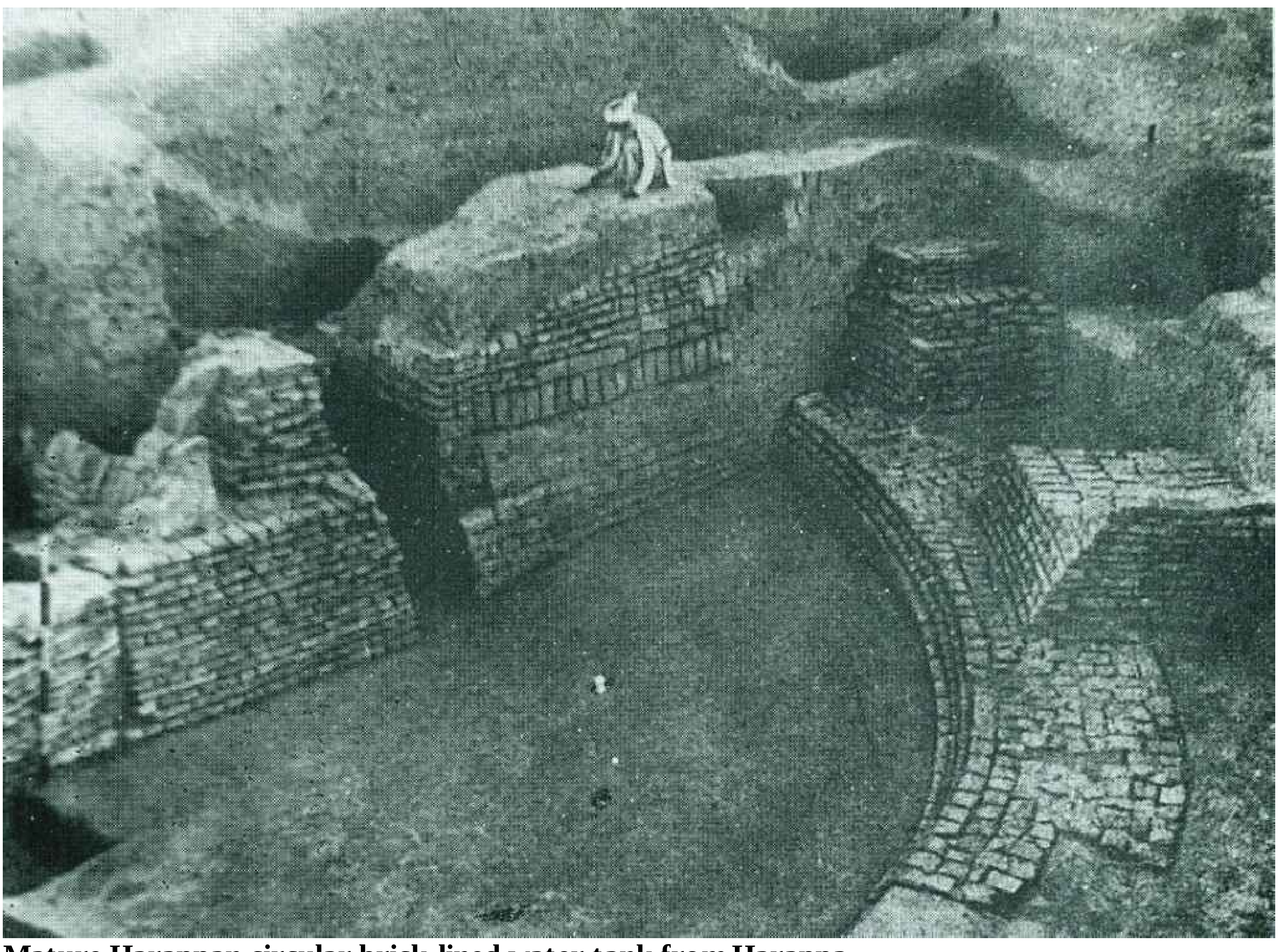
del" as the seat of religious life for the city or its rulers. In modem Hinduism, and indeed in some other religious systems, ceremonial cleansings are an important feature, and the elaboration and prominent position of the bathing establishments on the Mohenjo-daro citadel proclaim their official status (13). He felt that the Great Bath and the ‘extravagant provision for bathing’ were both testimony to the importance of water in Indus life, as well as a tie to later Hinduism (13). Jansen (5) was another archaeologist who emphasized the great reverence of the Harappans for water, taking the Great Bath as well as the universal arrangements made throughout the city for drainage, wells, and bathing facilities, as evidence.

Private homes were furnished with sophisticated indoor bathing and toilet facilities that were plumbed and lined with ceramic tiles in a relatively modern way. The plumbing and sewer systems were superior to those found in other cultures of the time and are in fact superior to facilities found in many Indian and Pakistani homes today. Not only did individual homes feature advanced lavatories,

but municipalities did as well. Mohenjo-daro and Harappa each had a large central bath with public access. These public baths predate similar facilities in ancient Rome by many centuries. The ubiquity of the public baths, their central locations, and the care with which they were constructed all point to a deep preoccupation with purity and cleanness.

The Great Bath at Mohenjo-daro has been extensively researched and written about. It consists of a multiple room building surrounding an open courtyard which in turn contains a large water tank 23x39x8 feet. A flight of steps to the bottom of the tank is located at each end. A large well lay to the east of the colonnade, along with a series of bathrooms, presumably for participants to purify themselves before taking part in a ritual. The complex could be entered from the North, from the secluded residential area probably housing its staff (presumably priests or high class gentry). It is generally believed that the Great Bath could not have been used solely for sanitary purposes, since most of the houses had bathrooms with the provision of water. Rather, it must have been constructed to fulfill ritual functions of the culture.

It is presently an archaeological dogma that Mohenjo-daro was the religious center of the Harappan state (or city state), if not its political capital too. The Great Bath does not look like a temple, but it does very strongly suggest a place of ritual. The following points serve to justify this opinion. First, the building in which the bath is



Mature Harappan circular brick-lined water tank from Harappa

housed is elevated and secured away from the Lower Town, both highly symbolic. The bath was filled with water and was a place of bathing or taking one's ablutions, in part evidenced by the “bathing rooms” on the eastern side of the building., mentioned before. The symbolic nature of water and cleanliness, both physical and ritual, seems to apply here. Thus, the notion that the bath was a place for ritual bathing makes a great deal of sense. The College of Priests, across Main Street from the Great Bath, is a very large

building and might have functioned as a complealso ask why a tank for public use should have ment to the Great Bath. But there is no compelling been given a wide enclosure wall as at Mohenjoevidence for this, save for its size and location. daro. Ratnagar thus infers that this structure was The thought that this building was a temple has not for public use.
no corroborating evidence. Also of interest is the way the steps were

Marshall and Macklay suggested that the constructed. At Madurai, steps led into the tank Great Bath was a tank for public ablutions. This along all four of its sides. At Mohenjo-daro, howhas parallels in ritual tanks in the early historical ever, the steps were built only at the two short literature of India. Pucker or Lotus-Ponds were ends, and were contained in rectangular projecconstructed throughout the early historic period to tions extending out from the centers of these two adjoin temples. These ponds were used for ritual sides, while the lowest step was a platform runbaths and purification rites, but were also used to ning along the entire width of the tank on each of consecrate early Indian priests and kings. Anthe North and South sides. It is therefore tempting other function of the pucker mentioned in early to assume that the intention was for a person to sources links it with primitive fertility rites. The enter the tank from one end and climb out at the

opposite end (14).



Considering that the north end of the structure is different on plan from the south end - on the north is a 'transparent zone' of rows of pillars
- Ratnagar visualizes the ritual as involving ceremonial entry into the building; descent into the tank from one end; emergence from the tank at the other end; and final exit by a ritually transformed personage from the opposite end of the building. Perhaps only royal persons immersed themselves, in a semipublic ritual, watched by but formally distanced from others who officiated at the ceremony and probably stood beyond the clerestory. “If this is acceptable, then the ritual

A small water tank at Dholavira, Gujarat, that was most likely used for ritual bsathing. Notice the seat near the right wall for the bather

apsaras , water-deities, resided in the puckers.
The *apsaras* were lovely water-nymphs skilled in



song and dance who would consort with men and would inevitably be responsible for the downfall of heroes. Some ancient Indian dynasties claimed to have been descended from the brief union of an

A goat is being offered as a sacrifice to a tree spirit by an efficient with an elaborate headdress and a long pigtail. Some additional food, probably also an offering, is resting on a stool behind the officiant

apsaras and a particular hero. Kosambi (7) postu lates that the small rooms surrounding the Great Bath were used for ritual cohabitation between the male bathers and female attendants, compa rable to *apsaras*, who were devotees of the mother goddess to whom the complex was dedi cated. This would be analogous to the temples of Ishtar in Babylon and Sumer where girls would participate in similar rituals.

Ratnagar (14), however, differs with such a correlation. South Indian temple tanks are very late, a post-Chola development, dating from the fifteenth century onwards. Moreover, these lie amidst sprawling temple complexes, and are themselves truly large. For instance the tank in the Minakshi temple at Madurai is about 50 x 36.6 m and that in the Siva temple at Chidambaram, 84 x 53 m. So these two late and public tanks are respectively more than twenty and fifty times larger than the tank at Mohenjo-daro. We might was one in which the royal person underwent a renewal or rebirth of his spiritual forces so that the fertility of his land and people were likewise regenerated" (14).

The presence of water tank is not specific to Mohenjo-daro; though there is nothing comparable in any other site. A circular water tank at Harappa seems to come close as ritual bathing facility. Similarly, a water stank at Lothal may have been used for communal bathing on the occasion of ritual ceremonies. The recent excavations at Dholavira revealed a number of water facilities in the citadel. One of these is a small tank where there is a cylindrical block as a seat. There were also a larger water tank and a well and there may have been associated bathrooms. The presence of these structures is, however, not universal on all sets. For example, no evidence for such an edifice comes out at Naushahro, Chanhudaro, Allhdino, etc.

Ritual Sacrifice and the Cult of Agni: Sacrifice of animals and in some cases probably human beings, is an integral part of all ancient religions. These sacrifices can be symbolic or real, but they are crucial to the worship of the deities and the perpetuation of beliefs. Closely related to animal sacrifice is the offering of other foods to deities as an act of propitiation or worship. While *sacrifice* often implies ritual killing, the term *offering* can be used for bloodless sacrifices of cereal food or artifacts.

For offerings of liquids (beverages) by pouring, the term libation is used. Animal sacrifice and offering of food served a social or economic function in those cultures where the edible portions of the animal were distributed for consumption among those attending the sacrifice or offering.

Whether the Harappans carried out these sacrifices or made offerings of any kind to their deities, supernatural spirits, and ancestors, is a moot question. The general evidence is that they did and such scenes are depicted on some of the seals and tablets. In Indus iconography, we find a strong evidence for animal sacrifice as well as the offering of other food to deities or spirits. In one of


"Fire altars" at Kalibangan

the seals, reproduced below, a goat is being offered for sacrifice to a deity in a tree while a head of an animal (or that of a human) is shown resting on a table. A few tablets depict a supplicant holding a jar to a tree deity, probably offering a libation. It has been suggested also that these scenes of sacrifice and offering may not be related to any deity but simply an act of shamanic practices.

Closely related to animal sacrifice is the concept of using fire and smoke as a vehicle of transporting the sacrifice to the gods. This practice attained a special importance in RgVedic religion in post-Harappan times as it was apparently the case in the Middle Eastern religions. Gradually, fire itself became a deity and fire altars became points of worship to *Agni*, the god of fire. Additionally, as water was an agent of purification, fire also became an agent of ritual purification. The roasting of sacrificial meat and symbolically sending it to the deities would certainly not be out of place in the Indus Valley because this practice was quite prevalent in the western borderlands, that is, in Iran and beyond. The 'fire altars' and deification of fire itself is, however, another matter.

Efforts have recently been made by some Indian archaeologists of Hindutva leaning that such a fire cult existed in the Harappan religious practices and that fire, in fact the *Agni*, was one of the Harappan deity. Some oblique archaeological evidence was offered by B.B. Lal and since then the idea has been uncritically repeated by a host of 'Vedic scholars', even by some western archaeologists of repute, so frequently that it has become almost a fact. The evidence is, however, tenuous at best and misuse of archaeology at worst.

Small clay-plastered pits have been found at Kalibangan, Lothal, and Bananwali, in public places as well as within some houses. These have been described by B.B. Lal (8) and S.R. Rao (9) as 'fire-altars'. They were presumably used to burn the animal sacrifices and send them to the desired deities through *Agni* (fire) as the messenger. These discoveries are often cited to prove that the Harappans had a religion similar to the RgVedic people, or that the Harappans were the RgVedic Aryans

themselves.

These “fire altars” were first uncovered at Kalibangan, where one of the platforms in the southern part of the citadel had a row of seven oblong clay-lined pits containing charcoal, ash, and terra-cotta cakes; such cakes were used in kilns to retain heat and perhaps had a similar function in these fire pits. In one pit there was also a cylindrical clay stele. A paved bathing platform and a brick-lined well were associated with these pits. On another platform, a single fire pit was found alongside a rectangular brick-lined pit containing antlers and cattle bones, presumably from animal sacrifices.

B.B. Lal, the excavator at Kalibangan, claimed that the “fire altars” complex must represent a civic ritual center where animal sacrifice, ritual ablution and some sort of fire ritual featured. The shapes of these ‘altars’ are not clearly indicated. The excavators also noted that in the houses of the lower town, apart from the normal domestic hearths and ovens, one room was set aside for a similar fire altar, a feature which is strikingly suggestive of the 'fire room' of late Vedic and later Hindu tradition. This, therefore, one may interpret as representing a domestic fire ritual or worship. There was also a third context in which these fire altars were found in a small brick-walled courtyard outside the lower town towards the East. Here several ‘fire altars’ were discovered along with pits containing ashes, but no other structures. This may be interpreted as another ritual center, belonging to the lower town and perhaps of lower hierarchical importance than those of the citadel.

Several round and rectangular structures located at Lothal have also been termed by its excavator, S.R. Rao (9), as “fire altars” and “sacrificial pits” while at the same time suspecting that these might be ordinary hearth rather than the fire altars. Still, their designation as ‘fire altars’ and ‘sacrificial pits’ has been vigorously propagated by the same person as well as by other Hindutva men of letters.

The distinction between fire altars and domestic hearths is not always clear. Excavations at Nausharo have uncovered similar structures in a domestic context where they are interpreted as hearths, albeit of an unusual type; these bore some resemblance to the hearths used by the later inhabitants of the Deccan (India), which sometimes had a central clay support for pots. This therefore begs the question whether the domestic "fire altars" were in fact ordinary hearths or, conversely, whether all domestic hearths could have been used in family worship as well as for cooking. Alternatively, do these ‘fire altars’ have anything to do with any religious ritual or are they simply cooking hearths. The excavator, B.B.Lal, does not express his opinion clearly.

These structures, whatever their nature or archaeological significance, seem to have appeared towards the end of the Harappan settlement in Kalibangan, around 1650 BC, and their presence may well be attributed to Vedic contacts of the Indus people in the post-Harappan period. The carbon dating of similar structures at Lothal also point to a Late- or post-Harappan period. The excavator of Lothal assigns the earliest evidence of a “fire altar” to Lothal IIA. The radiocarbon date of this is 1555. This late date is outside the limit of our definition of the Harappan Civilization and pushes it into the post-Harappan period when the Indus Civilization had already wilted or was in throw of death.

It should also be noted that all the places where these ‘fire altars’ and ‘sacrificial pits’ have been found are located within the boundaries of India and none of these ‘fire altars’ or ‘sacrificial pits’ has been found in the core area of the Harappan Civilization, that is Pakistan. As stated above, a large number of fire pits have been discovered at several Early and Mature Indus sites in Pakistan by western and Pakistani archaeologists but none of them has identified them with the ’firealtars’: they are just seen to

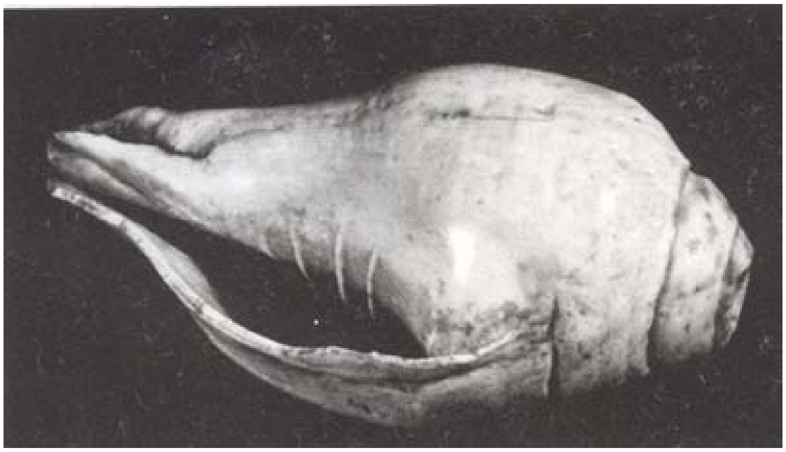
be the precursors of *tandoors* or *chulas* still used all over Baluchistan, Sindh, and Punjab. A few others, discovered in Baluchistan, have been duly related to *dash*, still popular in northern Baluchistan and the Pashtun country for baking flat bread. A huge fire pit has been discovered at Gumla which belongs to the early Neolithic settlements in the region. This fire pit is full of animal bones but no western or Pakistani archaeologist has identified it with a ’fire altar’. Other fire places, such as those discovered at Harappa, have been interpreted as nothing but hearths for cooking family meals. It is possible that the structures discovered at Kalibangan and Lothal also functioned as small ovens in which fuel was supplied from above such as is the practice in the working of *tandoor* in Punjab. Richard Meadow has noted that the most typical hearth at Harappa is oblong or keyhole shaped with a pillar in the centre. All that have been found during the recent excavations there are in domestic contexts, with up to three in one room. This seems to be a standard type Indus hearth, at least in the North, and could be what the Kalibangan examples were used for.


A small shell ladle from Chanhu- daro (*after Kenoyer***)**

Possehl (6) summarises his thoughts on the Fire Altars: “Fire ritual in the Indus Civilization emerges rather poorly from the archaeological record. The best evidence for it comes from Kalibangan. Taken alone, the plastered pits with ash and bone on the High Mound there are not fully convincing as ritual facilities, since they could have been for domestic use. The

poorly known ‘Ritual Structure’, with a concentration of these pits, separate from the town itself, is more difficult to explain in this way. But, we need to know more about the ritual structure before making a final judgement on fire ritual in the Indus context. There is a temptation, of course, to imagine fire as the opposite of water, and to place it on the male/ animal side of the great Indus duality.”

In summary, such doubtful ’sacrificial altars’ at two locations, this too in postHarappan context, are certainly too few and too late examples for propounding the existence of an ox-slaughtering cult or for claiming Vedic affinities. Having said the above, the existence of fire wor



Conch shell trumpet from Harappa. Similar trumpets are still used by *Qualanders* and *fakeers* throughout Sind

and southern Punjab. (*after Kenoyer*)

shipping cults in the Indus Valley is not far from possibility; fire has been held sacred in neighboring Iran and a whole religion (Zoroastrianism) later rose on this edifice in later times.

Ritual Utensils and Paraphernalia: Most of the sacrificial rituals involve specific paraphernalia. Harappan remains do not indicate a robust evidence for sacrificial cults or directly point to the



Terracotta mask with simulated horns and long

ears.

ritual items used in these services. The existence of ritual objects, however, cannot be denied and some evidence for such a paraphernalia must be admitted. A few items of this nature has been pointed to by some archaeologists but their relationship with sacrificial rituals seem only to be tangential.

Ritual furniture includes the wide thrones on which the horned 'deities' or the shamans are seated. These

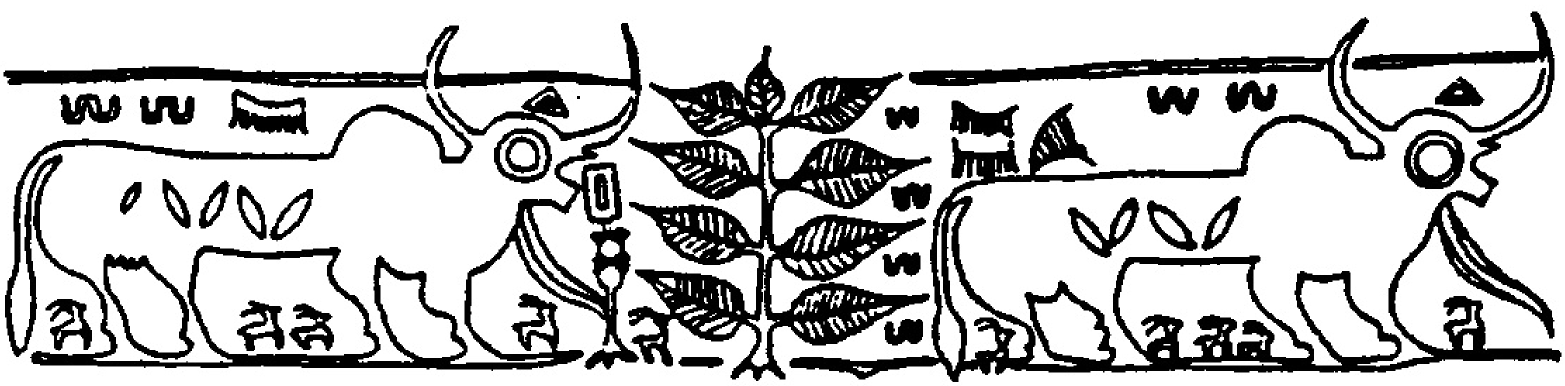
thrones often have legs carved with the hooves of a bull. Short stools were used by individuals sitting in front of the deity or the deity itself seated on it. A short table displayed the sacrificial offering. Elaborately crafted objects such as shell ladle and libation vessels may have been used for pouring sacred offerings of water, milk, oil or butter. Several examples of these distinctive vessels have been

found at Mohenjo-daro and one example made from another shell spe



A perforated jar from Mohenjodaro. Its utility

or significance is not yet known

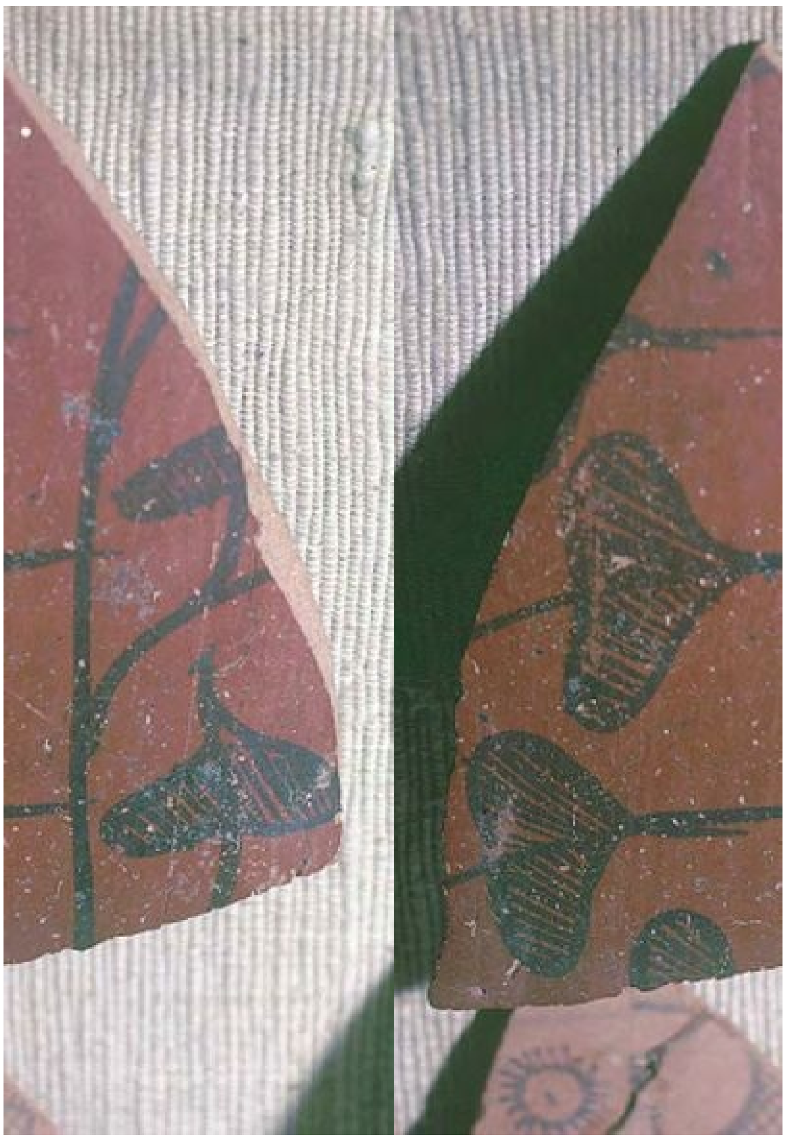


Inscribed on a small ivory object found at Harappa. The tree between the bulls is though to be a pipal tree

cies was found at the nearby site of Chanhu-daro. One ritual object made from the conch shell *Thrbjnella pyrum* is a trumpet that has a mouthpiece chipped at the apex of the shell. This unique example of a conch-shell trumpet was found at the site of Harappa. Trumpets made from horn or shell are used in many cultures throughout the Old World to call people together for rituals or for battle. In later Hindu and Buddhist rituals, the conch shell was sounded to call the deities to the sacrifice and purify the area in which the sacrifice was to take place. Since only one conch trumpet has been found, it is possible that this instrument was just beginning to be used when the cities began to decline. However, both the conch trumpet and the

conch shell libation vessels continued to be used in later times and are still an essential component of Hindu rituals. The use of conch shell trumpets is also seen among the wandering *fakeers* and the *Kalandars* throughout Sindh and southern Punjab in Pakistan. Whether it is a remnant of the Harappan culture in this region or a later day import from India cannot be said with any degree of certainty.

Scholars believe that the Harappan seals and molded tablets illustrate many other objects used in specific rituals. The most common object is the ritual offering stand that has been interpreted variously as a sacred filter for making an intoxicating drink



Kot-diji shard from a burial vessel: Leaves on a branch of the *ficus religiosa* ttree, also known as the the Ashvattha, Pippel or Bodhi tree.



A beautiful terracotta molded tablet, showing a tree of unknown identification

called soma or an incense burner. Shallow basins or feeding troughs also may have had some ritual significance as a container for food offerings to totemic animals. One tablet shows a procession which is being led by the carriers of such an offering stand. No intact example of this contraption has, however, been found at any site.

Some archaeologists have pointed to the terracotta masks as an object of ritual performance. They were human faces with bull ears and horns. The masks were made from molds and had two small holes on each side. Their small size, between four and seven and a half centimeters, however preclude them to be used as masks in mass performances and thus do not seem to have any ritualistic value. It is possible they were attached to clothing or as ornamentation.

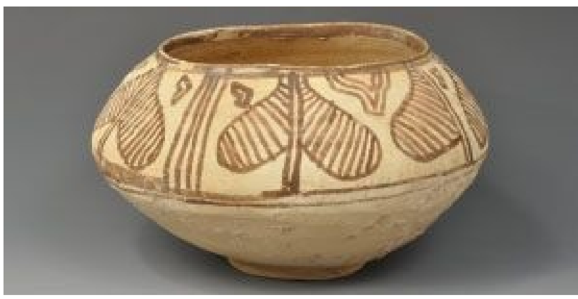
Another curious object, which may have been used in some type of rituals by the Harappans is the so-called perforated jar. There is, however, no agreement for the utilitarian nature of this vessel or its ritualistic value so far. There are also the question marks on bone and ivory sticks with graduation marks. Were they the measuring sticks? Were they the tools of trade for the shamans, or were they simply objects for performing some rituals?

Sacred Trees and Tree Spirits: Trees have played an important role in many of the world's mythologies, and have been given deep and sacred meanings throughout the ages. Human beings, observing the growth and death of trees, the elasticity of their branches, the sensitivity part in mediating between the human and the divine in the Indus religion, and, as evident from the Harappan iconography on seals and tablets, many plants and animals seem to be venerated. The *neem* and acacia trees are sometimes recognizable but the depiction of *pipal* tree is unmistakable. Often it is shown to be the abode of a tree deity. The use of the pipal tree as a symbol or decoration motif appears in the Early Indus cultures of Baluchistan and western Sindh with discrete regional variations. In the Maure

Harappan period, this motif continues to be popular, appearing not only on painted pottery but also on seals and tablets. It is largely a decorative theme but



A tablet depicting the scene of an efficient and two supplicants making an offering to a tree spirit (in the tree), which is communicating with the tiger.


A Harappan biconical pot, painted with a pipal tree motif


M-478 A **A supplicant making offering to the spirit that resides in the tree**

and the annual decay and revival of their foliage, saw them as powerful symbols of growth, decay and resurrection. Examples of sacred trees featured in South Asian mythology are the Banyan and the Pipal (*Ficus religiosa*) trees, especially in Hinduism and Buddhism. In folk religions, including the folk Islam practiced in Pakistan, trees are often said to be the homes of spirits, the *Jinns*. Historical Druids as well as Germanic pagans had a strong elements of cultic practices that involved sacred groves. Trees seem to play an important some of this symbolism could as well be religious in nature.

In a famous seal from Mohenjo-daro the pipal tree is divided into twoo main branches, each with three leaves, and the deity wears a horned headdress with a curved branch emerging from the center (see Chapter II.2). At Mohenjodaro a spirit or the deity is always shown standing in the midst of the tree, while at Harappa he (or she) is shown standing beneath an arch made of leaves. For example, a recently discovered terracotta tablet from Mound ET at Harappa portrays a deity standing beneath a curved arch of thirteen pipal leaves. Although this deity does not wear the horned headdress, a stylized branch that has three "leaves" projects from the center of the head and a long braid hangs at the back. Both arms are covered with bangles and held at the side in a formal pose. Three smaller tablets have seven- and eight-leafed arches. The use of garlands and arches created with pipal leaves is often taken as the sacred nature of this tree.

According to During Caspers (1), what is usually described as being the bole or the roots of the pipal tree is a low enclosing ring resembling the brick enclosures seen on the Harappan pottery and on the seals, and representing the brick circles which were discovered in the HR Area of the Lower Town and in the L Area of the citadel of Moenjo-daro. In all the above representations, it seems that we are confronted with a ritual, probably shamanistic act performed in the vicinity of or actually in connection with the pipal tree standing inside a brick railing.

Besides being shown inside a solidly painted enclosure or tub on the painted pottery, the pipal tree is also depicted in another context which During Caspers discussed as follows:



A recently discovered terrtacotta tablet from Harappa, depicting two

water buffalo under a tree *(HARP)*

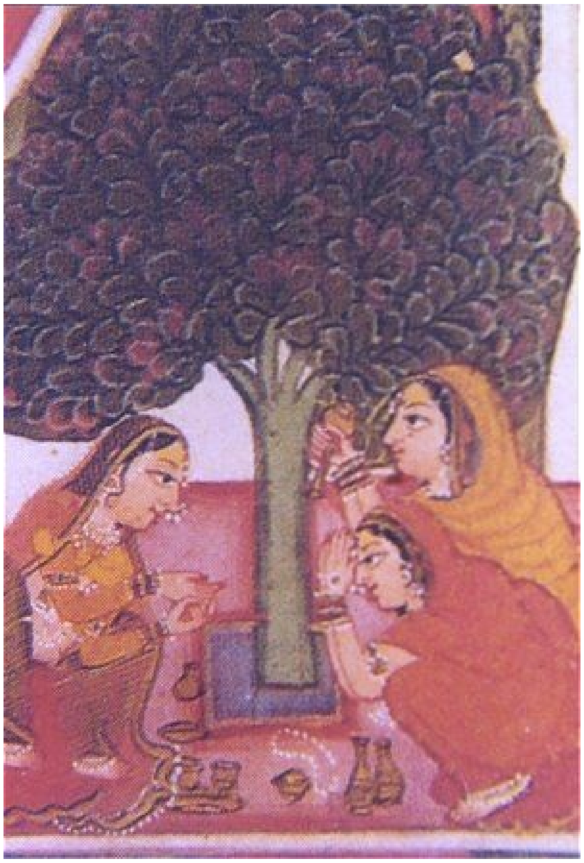
"Three 'sealing amulets' from Harappa show the pipal forming an arch over a standing figure, possibly plumed or wearing horns. These examples gain considerable importance when contrasted to an intaglio representation from Mohenjo-daro (Seal 430, depicted in Chapter II.2) showing a horned figure wearing a short thick pigtail, both arms loaded from wrist to armpit with bangles. It stands in between the

branches of a pipal tree. Confronting this, an equally schematic human being is shown in the characteristic seated position. It bears a central upright branch with three splayed pipal leaves. This figure also shows a short thick pigtail and the arms again are adorned with closely set bracelets. The arms are raised as if stretching out to the figure in the pipal enclosure, perhaps in a gesture of supplication. A composite ram-like human-faced animal with a tufty chest and with laterally undulating horns stands behind".

According to Caspers (10), the *Ficus religiosa* was apparently held in such a high esteem as to produce at least seven variants of the pipal leaf in the Indus script. Also some of the small steatite tablets from the earliest levels at Harappa are in the shape of a pipal leaf. This, however, does not automatically mean that the pipal tree was as such worshipped as a sacred tree as a number of archaeologists and 'Vedic scholars' have concluded. Certain trees, among them also the pipal tree, were most probably thought of as the abode of particular spirits and deities and the veneration was

most likely of the spirit in the tree rather the tree itself. Due to the very schematic and inaccurate rendering of such diagnostic features as the shape and the formation of the leaves, the tree species on various tablets cannot be identified with any degree of confidence. The pipal tree, on the other hand, stands out because of the schematic presentation of its leaves on diverse media.

As described in Chapter II.2, there is no doubt that the Harappans worshipped certain spirits and deities that appeared in sacred trees. In



A medieval painting depicting the tree worship, from northern India

many cases a figure is shown looking through the branches of the tree. Scholars believe that this represents the tree-spirit. In many cases worshippers are shown standing in front of the tree. In many other cases a tiger or some other animal is shown in front of the tree. In one case seven human figures are shown standing in front of the tree, with a horned-figure standing in it (see Seal 430 depicted in Chapter II.2). The seven figures have sometimes been identified with the seven great sages or seven mothers of the Hindu mythology. In several cases, terracotta molded tablets from Mohenjo-daro as well as from Harappa show a supplicant bowing to a tree with a jar in his hand, apparently a libation offer to the tree spirit.

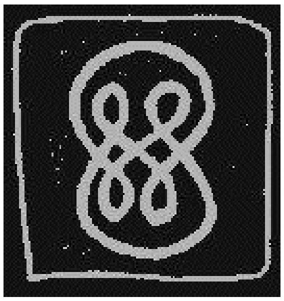
The tree identified as the *neem* tree also occurs on the painted pottery as well as as on the molded tablets, sometimes standing inside a solid enclosure or tub. In other instances, however, it is seen without an enclosing fence. This omission may lie in the nature of the scene in which this *neem* tree clearly played an eminent role (1). In such scenes we invariably see a matchstick-like

figure without horns or a horned headdress; but wearing the hairbun tied at the back of the head, a hairstyle frequently encountered in the Indus culture. This figure sits with the characteristic seated position on the lowermost branch of the *neem* tree, steadying himself with one hand against the trunk

and with the other stretched out towards a tiger which, without exception, looks back at him over its shoulder (see the figures in Chapter II.2).

The recurrence of the three components, namely the *neem* tree, the figure on its lowermost branch and the backward-looking tiger, raises the question whether we are witnessing an act symbolizing the inextricable interdependence of mankind, the animal world and the rest of nature. The choice of the tiger as the wild beast *par excellence* to represent the animal world can be matched to the fact that the tiger is sometimes portrayed as wearing a pair of zebu horns to underline this beast's supernatural status.

The medicinal qualities of the *neem* tree are wellfamed because of the fact that almost every part of this

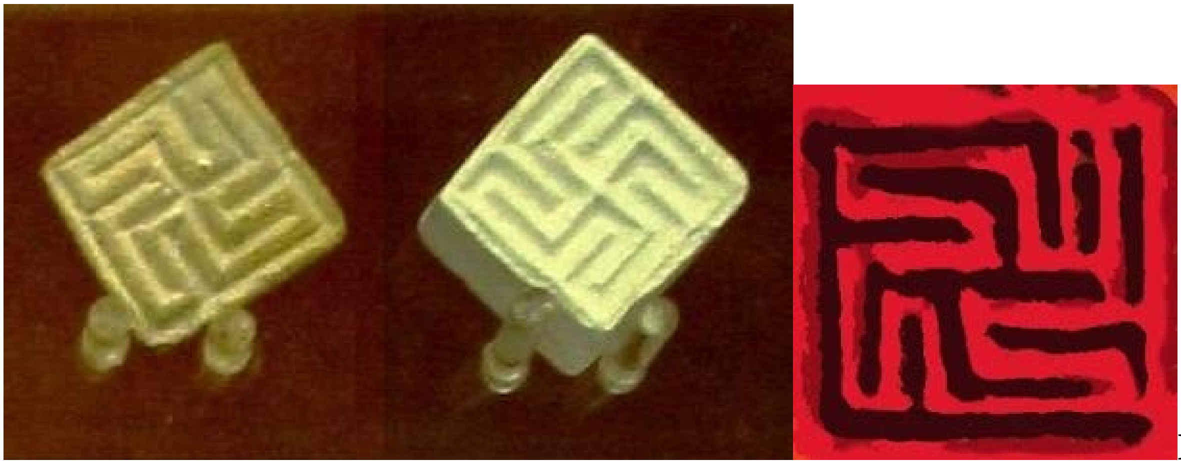


An endless knot motif on an Indus seal



A modern version of the endless knot

tree has found application in indigenous medicine in South Asia. Leaves, leaf extract, bast and bark, gum, young shoots, blossom, fruit, seeds and seed-oil are all applied in combination with other medicinal ingredients in the treatment of various skin diseases, like scrofula and leprosy, and of fevers such as caused by malaria, rheumatism, urinary, stomach and liver diseases (11). The medicinal properties of the Pipal tree and of the acacia family do not equal those of the *neem* but the leaves and the tender shoots of the pipal are used as a purgative and as a medicine against skin diseases. The blossom, which is homogamous, is used against mild fever. The species *Leguminosae* of the large acacia family provides gum for indigenous medicine, and Babul gum in particular is credited with numerous virtues. The dried pulp extracted from the wood of the *Acacia catechu* has digestive and other medicinal qualities.



Indus seals bearing the Swatika symbol (left) and an impression of a seal from Altyn Deep, Turkmenia,

The pipal and neem trees are quite common throughout Hindu mythology, where they serve as important symbols of fertility and protection and death. Phallic symbols dedicated to the god Shiva are often placed at the base of the pipal tree, and rituals to the goddess Savitri are performed with the tree to ensure many children and avoid widowhood. Attempts are often made to make a connection between the reference of pipal tree in Hinduism and the iconography of the Indus. The various representations apparently do give credence to this idea. Such a connection is, however, not certain and probably unlikely because of large temporal gap between the Harappan period and the rise of Hinduism in India.

Religious Art and Symbols: The symbols that reflect ideology, religion and social order have been used in the Greater Indus Valley since the Neolithic period, but there was a dramatic increase in the production and use of symbolic objects in the Early Harappan times. Abstract designs and other motifs are frequently found on copper tablets and a few seals, on pottery and other artifacts, or incorporated into design of objects. Many objects or motifs, such as the pipal leaf, had their origin long before the rise of cities, but other symbols, such as the unicorn, were newly created in context of cities.

Indus religious symbols include abstract diagrams, stylized representations of natural phenomena, images of plants and animals and fantastic combinations of human and animal forms. In many religions, the distinction between human and nonhuman is fluid, and symbolic representations combining humans with animals or plants are common. Although there are hundreds of variations in terracotta figurines and other symbolic artifacts, recurring groups of artifacts and narrative themes appear to represent the core beliefs that united the Indus communities. Some of these themes can be compared with early religions in Mesopotamia and Central Asia or with later belief systems of the subcontinent itself; others can only be understood in context of the Indus cities alone.

The heart-shaped pipal leaf was particularly common, used to symbolize the pipal tree and in other contexts, for example in headdresses worn by deities, often combined with horns, and as a blanket over the back of the unicorn on seals. Geometric designs, most commonly found on pottery and seals, also recur as carved decoration on tools, gaming pieces and even inlaid objects. It is possible that some of these designs may have been symbols of different facets of religious and social order that served to unite Indus culture.

The endless-knot motif found on copper tablets at Mohenjo-daro may have been an important symbol of a specific cult or community. This motif does not appear on other objects, but related designs are

found on tablets and seals as well as on a copper celt from the site of Rojdi, Gujarat. In Mesopotamia the endless-knot design and related forms are found on some seals, and in India it continues to be used in later Hindu religious contexts. Traditional Hindu women throughout the subcontinent continue to paint similar ritual designs to protect and purify the home. What these ritual designs meant to the Harappan people, we cannot know. Whether these symbols indeed had any religious significance, we can only speculate.

Other motifs are the swastika and intersecting circles, both of them probably auspicious signs. Overlapping circles formed a design used on pottery, occasionally on tiles, and on shell inlays, and echoed in eye beads; other designs, on pottery and elsewhere, included a fish scale pattern, circles with a central dot, and checkerboards. A circle or oval resembling a six-spoked wheel occurs in a number of contexts, especially as a sign in the script. It is likely that it represented the sun disc since spoked wheels had not been invented by this time, and this is a way that many cultures have chosen to represent the sun. This interpretation is supported by the symbol's appearance above a scene on a cylindrical molded terracotta tablet showing a female deity wrestling two tigers; in this case it is shown horizontally, perhaps to indicate that it was not to be read as a script sign. Symmetry, geometric complexity, and order seem to have been key features of these motifs; the same guiding principles underlie many aspects of Harappan life and may have a religious connotation.

Harappan Burial Rites and their Religious Significanvce: The burial practices of a society can be an important source of information about the religious beliefs and social arrangements of its members. Modes of disposal of the dead may give us some clues about ideas of death and the afterlife. Burials link several lines of inquiry into a single object as they represent a single or small series of closely linked events. Biology, art, religion, communication, society, and personal psychology can all ideally be preserved in or represented by burials. A burial can be a snapshot of a people and their culture. However, the funerary practices of a prehistoric society can also skew one’s perspective and gross distortions can occur.

Research into the burial practices of the Harappan Civilization has thus far been limited. The only substantial cemeteries for the Indus Civilization are at Harappa, Kalibangan and Lothal.



Burial of woman and infant, R37, Harappa. This burial was disturbed in antiquity, possibly by ancient Harappan grave robbers. Besides the fact that the body is flipped and the pottery disturbed, the left arm of the woman is broken and shell bangles that would normally be found on the left arm are missing. The infant was buried in a small pit beneath the legs of the mother

There are many earlier burials at Mehrgarh (c. 7000–5000 BC), but since they are so early they do not pertain to this discussion. The rest of the funerary evidence is found at a few settlements like Nal in

Baluchistan, or the single convincing cremation site at Tarkhanwala Der in Rajasthan. It is apparent from what we know that there was a diversity of funerary practices for the Indus peoples, suggesting the kind of ethnic diversity that other remains tend to support. The earlier excavations at Mohenjo-daro and Harappa revealed surprisingly little clear evidence of Harappan burial customs, particularly as it is not certain whether any burials were found inside the cities. Marshall rightly believed that the main cemeteries of Mohenjo-daro and other large cities lay outside the inhabited areas and that they would be deeply buried by the rising level of the plain. The best evidence for this comes from Cemetery R-37 at Harappa and the cemetery at Kalibangan.

There is evidence for extended supine burials in pits and coffins, much as the custom the Muslims and Christians practice. Some Indus human remains were exposed to the elements and reduced to skeletons before being gathered together for final inhumation. Archaeologists call these ‘fractional burials’. Evidence for this practice comes from Mohenjo-daro and Harappa during the Indus Civilization and from Nal and other Baluchi sites during the Early Harappan. The evidence for cremation is not particularly strong, Tarkhanwala Der in Rajasthan having the only convincing data.

The Cemetery R 37 was explored in the years 1937-41 by WheeIer and MughaI, and later by Dales and Kenoyer under the Harappa Archaeological Research Project. These excavations shed some light on the distribution of grave goods and other matters of interest. Additional information comes from Lothal, where sixteen graves were opened in the cemetery along the western periphery of the mound by S.R.Rao. Of these sixteen, eleven date to the period of Mature Harappan. The site of Kalibangan has yielded some interments from a cemetery located to the west of the settlement. Some graves have been found with only offering deposits (grave goods without skeletons). Traditional extended burials continued at Harappa in the lower level of cemetery H (post-Harappan period), showing that the decline of the civilization did not universally affect burial practices. Except in unusual circumstances. In many cases this involved a physical separation between the body and the ground, by means of a shroud, coffin, or layer of pottery or clay; it is tempting to see in this an aspect of the concern with ritual purity.

Surprisingly, seals, which we would think the marks of individual identity, do not occur with the dead. Either the dead were not expected to continue with their worldly duties, or the graves so far excavated are not those of the seal-owning Harappan elite. Alternatively, our presumption for the function of seals is wrong. Instead of personal identifications, they were just amulets or instruments of making amulets.

Interestingly, Harappan burials show little evidence of social hierarchies, unlike Mospotamian, Egyptian or Chinese Bronze Age burials, where some interments may indicate considerable wealth. If one were to chose a single term to describe Mature Harappan burials it would be unostentatious. There are no hoards of gold or pyramids. Looking at the grave goods that accompanied the dead body, one conclusion seems to be evident: perhaps the Harappans believed that the transition to the afterlife required a rite of passage that involved burial (or other rites of disposal for which there is no evidence) but that, after this was performed, the soul had departed and had no further use for its bodily remains.

The fact that the Harappan buried their dead, in one way or the other, shows that they probably believed in the life after death. The presence of some artifacts with the dead bodies further strengthens this speculation. Yet what we have, seems halfhearted, as if these were burial conventions without vital

beliefs, something like the situation in the later periods of Pharaonic Egypt. All in all, the Harappans seem to exhibit a casual attitude towards their dead. The burial practices indicate that the beliefs and practices of the Harappans were oriented toward the present life here on earth and not toward a life hereafter. There is little in the ruins to indicate that Indus dwellers thought much about an afterlife or even wondered about what might be in store for the individual after death. We also have a strong sense that there was a diversity of Indus funerary practices, suggesting the kind of ethnic diversity that other observations tend to support.

Summary: In addition to the beliefs in gods and goddesses, the Harappan religion seems to consist of a wide variety of mythological narratives, rituals of large variety, belief in spirits who lived or appeared in sacred trees. Monumental buildings, serving as temples to their deities were, however, absent. In all appearances, much of Indus mythology was apparently reenacted in outdoor rituals, probably involving mass-produced inscriptions. The mass-produced terracotta pieces often show outdoor scenes, suggesting this possibility.

We have reviewed the plausible interpretations to the meanings represented on Indus imagery. They conform well with the evidence Trigger (15) gleaned from the several civilizations he studied (but did not include the Indus or Iran). In line with other early civilizations, the focus of the narrative imagery is on natural phenomena, and supernatural forms are presented as proxies for the powerful forces with which Indus people had to contend. Of special relevance are the relations of specific actions and the exaltations of recognizable heroes or deities, the forceful presentation of superhuman qualities and performance of great feats and devotion, and the expression of an underlying structure of oppositions of tamed and untamed.

Being largely an argo-pastoral society, Harappan culture was deeply concerned with procreation and fertility. Ritual practices and the production of images may have centered on ways to incorporate the sexual powers of animals.The Haappans were also deep into purification rites, as the large number of wells, water tanks, and bathrooms suggest. There is no doubt the element of animism and shamanism also existed in the Harappan religion(s), as the next chapter will show.

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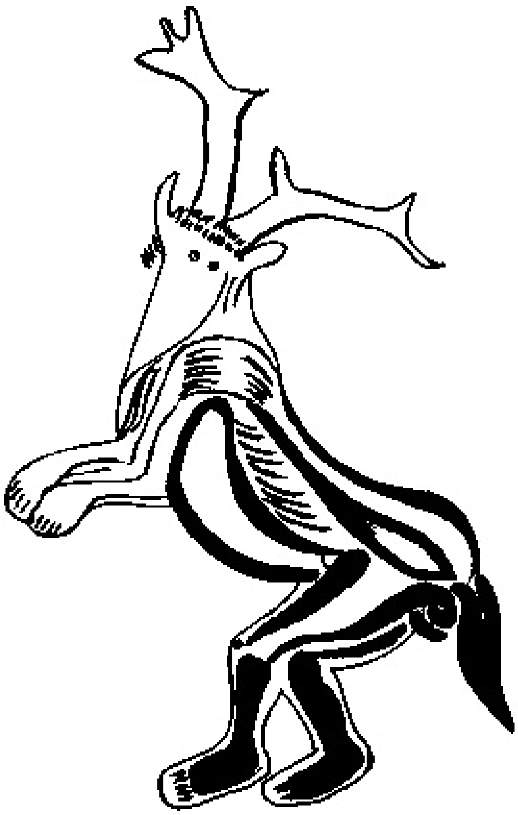
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Chapter II.4.

A World of Animism, Magic, Spirits, Divination, Shamans, and Amulets



A glaring omission in the studies of religion in the Harappan Civilization is the consideration of the beliefs which are generally considered as remnants of the Late Paleolithic and early Neolithic periods and which must have continued to linger on into the urban period of the Indus Civilization. Ratnagar (1) is probably

the only one who focused on this aspect of the Indus religion and drew our attention to the world of magic, spirits, shamanism, and amulets in which the Harappans most likely lived and functioned. During Caspers (2) is another such scholar; she draws our attention to hunting cults, which are, again, the remnants from the Indus Paleolithic past. These Late Paleolithic or early Neolithic ideas are, of course, not welldefined. We call the various shades of this general package of beliefs and rituals as animism, magic, witchcraft, and above all, shamanism. The use of notational or fetish amulets, believed to contain certain supernatural powers, fall in the same category. These thoughts are anthropological cultural universals and it is on this basis that they have relevance to the Harappan society.

Shereen Ratnagar (1) argues that if we can discount the “old Sacred Truth about Harappan religion as having been established by a faulty footnote in the general analysis of John Marshall”, we may attempt other interpretations, not necessarily more conjectural or speculative than the worship of Pasupati or invoking the blessing of a Mother Goddess. She, for example, presents a theory according to which the religion of the Harappan people was nothing more than a collection of Paleolithic and early neolithic beliefs and associated rituals, represented through various symbols and esoteric notations. In a relatively lengthy article (2), During Caspers also comes close to this conclusion. She bases her argument on a three-fold evidence: a) most of the pictographs of the

Harappan script stem from agricultural symbolism, thus, irrespective of its high level of material achievements, ideologically placing it in a hunter-gather and agricultural-pastoral cultural landscape; b) There is strong evidence, again gleaned through the script symbols and iconography, for dancing, which has been an unmistakable hallmark of shamanic rituals in a number of societies of the Bronze Age; and c) an array of images on the seal, tablets and amulets can only be explained through variously reconstructed animistic and shamanic practices known in other societies.

The belief in diverse spirits, magic, and related rituals, originating in primitive stage of human development continued to persist into the later urban societies and their remnants are found even in modern religions throughout the world. Thus, in order to study these religious beliefs and ritual practices, we must go back to the paleolithic in the hunter-gatherer cultures, which coexisted with the argo-pastoral societies such as the Harappan Civilization. This has, unfortunately, not been done. We hardly come across any reference to the remnants of paleolithic religious beliefs and rituals in the belief systems of early civilizations.

It has been conclusively demonstrated through ethnographic studies of ancient societies that the development of religion, based on discrete gods and goddesses, was a relatively late phenomenon in early civilizations. Most ancient peoples, especially hunting-gathering and early agricultural societies, believed in the power of what we would call magic. Magic, in this sense, is the process of achieving a desired effect through the use of rituals, words, thoughts, and other technical means. For example, many societies believed ceremonial dancing could induce rain. Because reproduction, both human and animal, was so vital to human survival, it was often made the object of magical practices. For these peoples, the world was populated by diverse spirits and they were as real as the concrete objects which they encountered in their daily life.

Furthermore, there was the belief that everything in the material world had a spirit as counterpart of their material existence. This aspect of ‘religious’ thought generated an array of myths which not only explained a number of natural phenomena but also described the origins of the universe around them. For example, the mythologies of some cultures told how the world and its inhabitants were produced by the sexual union of two supernatural deities. In such cultures, men and women might perform ritualized sex acts to ensure the fecundity of the land and its people. A magical performance imitating the primordial act of the supernatural powers was thought to provoke them to re-create or to harness the same creative and procreative powers in the service of human reproduction. In the Harappan culture, the creation and usage of the steatite seals and terracotta figurines depicting aspects of sexuality may have been a way of magically petitioning and assisting the divine forces in the crucial matter of continuing life.

Although magic, divination, and witchcraft are generally associated with hunting-gathering societies, they persisted as a sort of religion well into the Neolithic societies, even into the fullblown urban cultures. Indigenous magical traditions persist even to this day. As communities transitioned from hunting-gathering nomadic groups to agricultural civilizations, the role of magic decreased and the spiritual life started to congregate around some concrete identities of gods and goddesses. Just as tribal elders were consolidated and transformed into chiefs, monarchs and bureaucrats, so too did the soothsayers evolve into priestly class. This shift is not in nomenclature alone. It is at this stage of development that highly codified and elaborate rituals, setting the stage for formal religions, began to emerge, such as the funeral rites of the Egyptians and the sacrifice rituals of the Babylonians, Persians, Aztec, and Maya civilization. The indus Civilization was, of course, a participant in this

process.

There has been a hefty debate whether this world of spirits, which includes animism, magic, witchcraft, and shamanism, should be considered a ‘religion’ or even a precursor of religion. We may quote Earnst Cassirer for one extreme: “It seems to be one of the postulates of modern anthropology that there is complete continuity between magic and religion... We have no empirical evidence at all that there ever was an age of magic that has been followed and superseded by an age of religion” (3) and Robert Marrett, on the other extreme: “Many leading anthropologists, including the author of *The Golden Bough*, would wholly or in the main refuse the title of religion to these almost inarticulate ceremonies of very humble folk. I am afraid, however, that I cannot follow them. .... To label them, then, with the opprobrious name of magic as if they were on a par with the mummeries that enable certain knaves to batten on the nerves of fools is quite unscientific; for it mixes up two things which the student of human culture must keep rigidly apart, namely, a normal development of the social life and one of its morbid byproducts. Hence for me they belong to religion, but of course to rudimentary religion - to an early phase of the same worldwide institution that we know by that name among ourselves. I am bound to postulate the strictest continuity between these stages of what I have here undertaken to interpret as a natural growth (4)”.

In early civilizations people greatly feared spirits that sought to harm humans by causing illness, death, and misfortune to young and old alike. The Mesopotamians believed that swarms of malicious spirits were unleashed upon humanity by the deities who ruled the underworld. Neglected souls of the dead also roamed the world seeking to feed or otherwise prey on relatives and strangers (10). The Aztec believed that the souls of women who had died in childbirth returned to earth to murder children. In Egypt, hosts of demons collectively representing the forces of disorder threatened humans, especially during the night (11). Among the Inca malevolent spirits appeared in various forms, such as floating heads and long-breasted women.

The difficulty lies in the fact that in many cases it becomes difficult or impossible to draw any meaningful line between beliefs and practices that are ‘magical’ versus those that are ‘religious’. In general the term religion is reserved for an organized cult with a priesthood and dedicated sites of worship or sacrifice, while magic is prevalent in all societies, regardless of whether they have organized religion or more general systems of animism or shamanism. Religion and magic became conceptually separated with the development of western monotheism, where the distinction arose between supernatural events sanctioned by mainstream religious doctrine (“miracles”) and mere magic rooted in folk belief or occult speculation. In pre-monotheistic religious traditions, there

The concept that humans possess souls and that souls have life apart from human bodies before and after death is central to animism, along with the ideas that animals, plants, and

celestial bodies also have spirits.

(*Sara Wenner, in Basic Beliefs of Animism*)

is no fundamental distinction between religious practice and magic; the magic seems to be a culture universal in all societies. We shall deal with this topic in three subheadings: Animism, Witchcraft, and Shamanism. Although amulets and talismans do not fall into this category, they are the means for moving the spirits in one way or the other. We shall, therefore, say a few things about that also.

Since we do not have any written record from the Harappan Civilization at our disposal, we cannot have a direct access to these beliefs and practices. Our evidence comes partially from indirect deductions and speculative interpretations of archaeological remains, especially the seals and inscribed notations. Our main source of information is the comparative studies of other cultures for which much more is known. Since the belief in spirits, magic, witchcraft, shamanism, and amulets is universal among all ancient societies, we would not be off the mark we apply the same model to the Harappan society.

Animism: The belief in ghosts and spirits animating the natural world is universally present in the world's cultures and reemerges in monotheistic or materialistic societies as superstition, belief in demons, saints, angels, *peers*, and *valees*. In polytheistic religions, such as Hinduism, it takes the form of reverence for almost all the natural phenomena and the objects that inspire awe, fear, and intense curiosity. Animism encompasses the beliefs that there is no separation between the spiritual and physical world, and souls or spirits exist not only in humans but also in all other animals, plants, rocks, geographic features such as mountains or rivers, or other entities of the natural environment. Animism may further attribute souls to abstract concepts such as words, true names or metaphors in mythology. As stated above, these beliefs were not common in pre-urban societies alone; they linger on in almost all societies and in all religions, Christianity, Islam, and Hinduism included.

Animism is the term coined by Edward Tylor as a proposed theory of the origins of religion. Animism, in its simplest form, is the idea that all natural objects are endowed with a spirit or soul, known as "animae". This soul is understood to exist independently of the natural object it inhabits. These spirits were believed to govern the day-to-day activities of the natural world. It is believed that the soul can survive physical death. After physical death, some communities believed that the soul became a wandering ghost that actively intervenes in the day-to-day lives of people who are still alive. Other communities believed that the soul moved onto a more fertile world, where vegetation and game were plentiful. Animistic cultures had priests, known as shamans who performed rituals to appease these wandering souls

The Aztec and their neighbors believed that a divine power was diffused throughout the universe. This force animated natural phenomena, human beings, and humanly fabricated objects, as well as the gods. Aztec are reported to have believed that everything in nature had a soul - including plants, animals, and stones - and for this reason apologized to trees when they cut them down. The divine energy that pervaded the universe was of the same substance but different in degree and in the way it behaved. The Classic Maya used the same root to refer to sacred entities or deities that possessed wills and personalities of their own and to the cosmic power (or soulforce) that they believed hallowed and it was the power that made plants grow, animals reproduce, and people live and kept the cosmos functioning. It also sustained objects that human beings had made, including ceramic vessels and sacred buildings, and enabled those objects to perform their social functions and activated the entire universe.

The Yoruba concept of *ase* signified lifeforce and authority and the energy that was associated with the act of procreation. This force existed everywhere, brought all things into existence, and opposed chaos and decay. Some of the *ase* of a god could be incorporated into a potion and transferred to a devotee of that deity by being rubbed into his or her head. The *ase* of a king, who had the power of life and death over his subjects, was second only to that of deities, who created life. Like the power of life and death, *ase* was composed of contrasting qualities such as heat and cold, violence and peace,

danger and safety, red and white· *Ase*, as energy, manifested itself differently in different people or deities (5).

Although there is no direct evidence for China from as early as the Shang or Western Zhou periods, a similar concept, first recorded in the Han Dynasty, may have been *qi*, which is interpreted as referring to the formless but configuring primal energy present in everything that existed. *Qi* was associated with wind, breath, life, vapors arising from cooked grain, the human spirit, strong emotions, and sexual arousal. This concept may originally have referred to a primordial life-force emanating from the waters under the earth and animating everything in the cosmos, while *shen* denoted both individual celestial gods and the spirit force, associated with the sky world, that created form and order out of chaos.

In Egypt the creation narrative associated with the solar cult at Heliopolis identified the primary energy promoting the establishment and functioning of the universe as male sexual drive and sunlight. In New Kingdom temple rituals performed throughout Egypt, the sexual arousal of male deities by female singers and dancers played a vital role in the daily rites of cosmic renewal· In other Egyptian creation narratives, creative power was identified with supernatural power or magic, creative utterance, and supernatural insight.These powers seem to have represented a more abstract and analytical understanding of the forces that had created and sustained the universe. Associated with these powers was cosmic order, which prevented both deities and the universe from lapsing into primal chaos or cosmic disorder. (5).

Throughout European history, philosophers such as Aristotle and Thoma Aquinas, among others, contemplated the possibility that souls existed in animals, plants, and people; however, the currently accepted definition of animism was only developed in the fist millennium by post-Vedic Indian sages, from where the thought migrated to the Middle East where it flowered in the writings of a number of Muslim Sufi poets, such as Rumi. In modern times, Sir Edward Tylor created it as "one of anthropology’s earliest concepts, if not the first”. Tylor's definition of animism has since been followed by anthropologists. Animism is a belief held in many religions around the world, and is not, as some have purported, a type of religion in itself.

Several theories have been put forward to postulate that anthropocentric belief in animism among early humans was the basis for the later evolution of “religions”. For example, Sir E. B. Tylor, postulated that early humans initially, through mere observation, recognized what might be called a soul, life-force, spirit, breath or *animus* within themselves; that which was present in the body in life and absent in death. These early humans equated this soul with figures which would appear in dreams and visions. These early human cultures later interpreted spirits to be present in animals, the living plant world, and even in natural objects in a form of animism. Eventually, humans grew to believe that the spirits were invested and interested in human life, and performed rituals to propitiate them. These rituals and beliefs eventually evolved over time into the vast array of “developed” religions.

According to Tylor, the more scientifically advanced the society, the less that society believed in animism; however, any remnant ideologies of souls or spirits, to Tylor, represented “survivals” of the original animism of early humanity. In many animistic world views found in huntergatherer cultures, the human being is often regarded on a roughly equal footing with other animals, plants, and natural forces.Therefore, it is morally imperative to treat these agents with respect. In this world view, humans are considered a part of nature, rather than superior to, or separate from it.

A large part of mythology is based upon a belief in souls and spirits. Animism is a hefty part of religion in present-day India. It is also an important component of the folk religion in Pakistan. Various practices and beliefs include the belief in traditional magic systems and ecstatic rituals, largely borrowed from Hindus; the use of shrines and amulets; veneration of saints; and practices of shamanism (*Ammal*) and witchcraft (*Kala Jadoo*). The belief in angels and *jinns* falls in the same category, although it stems from the Middle Eastern religious traditions, not from Hinduism.

In the absence of any written records, we cannot gauge the depth of animism in the Harappan society. From the archaeological remains, especially the Indus seals and amulets, all we can gather is that a general belief in unseen spirits did exit in the Indus Valley and these spirits were the objects of reverence and worship. As described in the last chapter, sacrifices were made to appease some of these spirits, especially the one who appeared in sacred trees. In early civilizations, a general belief in spirits is manifested in magic and witchcraft; shamanism, and the efficacy of charms and amulets. Since it is a cultural universal, there is no doubt that the Indus people also indulged in these practices.

Magic and Witchcraft: Like animism, magic and witchcraft in various forms is also a cultural universal and an important aspect of early religions. Appearing from aboriginal tribes in Australia and New Zealand to rainforest tribes in South America, bush tribes in Africa and pagan tribal groups in Western Europe, some form of belief in a spirit world seems to be common in the early development of human communities. According to some anthropologists, the ancient cave paintings in Lascaux may have been associated with "the magic of the hunt." Much of the Babylonian and Egyptian pictorial writing characters appear derived from the same sources, so is probably the writing symbols of the Indus Valley. Witchcraft is relatively recent term and rather specific to the medieval times of Europe and it is essentially magic to harm others.


Preparing witch's brew in the Middle Ages in Europe

In all early civilizations, people feared witchcraft. It was believed that, consciously or unconsciously, some people sought to harm others by supernatural means, either because of envy or in retaliation for some injury that a person or group was believed to have perpetrated against them. Such people were often well known to their victims, but they could also be complete strangers. There were also sorcerers who were able and willing to help supernaturally inexperienced people practice witchcraft against others. These sorcerers might be clandestine practitioners wholly devoted to the use of supernatural powers for evil purposes, or priests, shamans, diviners, or curers who, while they publicly used their skills to protect and cure some people, secretly employed their knowledge to harm others.

In small-scale societies fear of witchcraft, in combination with gossip and ridicule, was a powerful force encouraging generosity and modesty. Individuals who were more skilled, more hardworking, more enterprising, or simply luckier than their neighbors were prepared to share their surplus produce with them rather than risk illness, misfortune, and death for themselves and their families as a result of their neighbors' envy being supernaturally directed against them. People who exercised leadership in these close-knit societies likewise took care not to flaunt their power in a way that would arouse envy or annoy people.

In early civilizations the fear and practice of witchcraft must have continued to function in this

manner among ordinary people, while members of the upper classes also practiced witchcraft against each other, often with the help of specialists. Yet the most urgent concern about witchcraft among the rich and powerful in early civilizations was their dread that lower-class people might use it to avenge insults, injustices, or mistreatment that they had suffered at the hands of their superiors. It was especially feared that lower-class people might resort to witchcraft to harm rulers in situations where overt resistance was hopeless. Thus, among the upper classes, witchcraft became intimately associated with concern that the people they controlled and exploited were seeking to harm them.

To some degree such fears may have helped to curb the exploitative behavior of the rich. Their main effect, however, was probably to make rulers fear their subjects more than they would have done otherwise, and this encouraged a determined effort to uncover and punish witches and sorcerers who might be seeking to harm them. The power of the upper classes to punish witches turned the fear that authorities might accuse ordinary people of being witches into a powerful means for intimidating and controlling the lower classes. Thus accusations of witchcraft, which in smaller-scale societies had served to promote social and economic equality, became in later civilizations a means by which the powerful could intimidate their subordinates.

The Inca state construed all crimes, regardless of the social status of the victims, as acts of sorcery and treason. Every form of misconduct threatened the well-being of the kingdom and the health of the king by angering the gods. Rulers sought to regulate wrongdoers' relations with the supernatural by making the expiation of wrongdoing dependent on confession of the offense to authorized priests or high-ranking chosen women (16). They also sought to control the clandestine manipulation of supernatural power by experts. These included sorcerers, who killed people by means of magical potions and images into which bits of hair, fingernails, or teeth of the intended victim had been inserted. People carefully destroyed or kept their own hair and nail clippings (16). Divination was employed to expose clandestine sorcerers, and any person found to have murdered someone in this manner was slain along with the rest of his family. Kings must have dreaded that such intriguers would become involved in factional intrigues among the Inca nobility. At the same time, rulers employed sorcery to enhance their own power. They had priests burn snakes, toads, and jaguars to weaken the power of gods who supported rival rulers and then examined the hearts of sacrificed llamas to see if the ritual had been successful (16).

Yoruba of all classes feared witches . Many witches were female, and the power to be one tended to be inherited in the female line. Such power could also be purchased from a practicing witch and ingested in the form of ritually treated food. The souls of witches were believed to enter the bodies of animals at night, while their own bodies slept. In that form they travelled about spreading disease and sucking blood and vitality from their victims. Witches were assumed to be inherently evil. They killed close relatives, drained life forces from children, ruined their husbands' businesses, and caused infertility. Divination was frequently employed to determine whether a death was from natural causes. A public form of behavior that was closely related to witchcraft involved the overt employment of supernatural power to injure a rival or an enemy (17).

There were in Yoruba society both people actively seeking to inflict supernatural harm on those whom they envied or believed had injured or insulted them and people who believed that they and their families were the victims of such behavior. The Gelede society in Yaruba people, which worshipped Yemoya, the goddess of rivers and mother of witchcraft, as well as other deities associated with sorcery, sought to control witchcraft by offering sacrifices to the souls of unidentified

witches. These sacrifices were intended to appease witches and deflect them from their intended victims. Individuals who felt threatened by witchcraft attempted to placate unknown witches by offering them animal sacrifices as substitutes for their own lives. The Egungun society, again in Yaruba people, had as one of its missions to confront and overcome witches, especially when their power was directed against hunters and small children. Older members of the Egungun and Oro societies hunted down and killed witches who persisted in threatening the well-being of society. Some Yoruba communities also performed special rituals that were intended to drive witches from their midst. Diviners were employed to determine who might be secretly performing witchcraft. Those who were accused of witchcraft were tried by ordeal and executed if found guilty. If they confessed, however, they were usually released, since confession was believed to annihilate their power to do evil.

In the Valley of Mexico, curers, midwives, and sorcerers were hired to perform various rituals to alter individual destinies and control the weather. These specialists often worked in conjunction with local priests to help people, but sometimes they used their knowledge to inflict harm on those they disliked or the enemies of those who employed them. The Aztec especially feared the activities of sorcerers, who had obtained the power to manipulate the supernatural by having been born on a particular day or having been trained by a practicing sorcerer. *Tlacatecolotl* (owl men) cast spells on others which caused them to get ill or die. Nahualli were able to project their souls into animal forms *(nagual)*, which roamed about while their human bodies slept. Nahualli intent on harming people penetrated the bodies of their intended victims and consumed the powers that animated them, causing sickness and death. If, however, the *nagual* was killed, the resident soul could not return to its human body, and this caused the *nahualli* to perish. Sorcerers also used charms, especially the arm of a woman who had died while delivering her first child, to render themselves invisible and rob houses.


A shaman from Mezar-e-Sharif, Afghanistan. PreIslamic beliefs still linger on

Aztec priests and curers attempted to discern the source of ailments that had been caused by witchcraft by tossing twenty maize kernels onto a cloth and interpreting the pattern they formed. They also counteracted sorcery with various rituals. Efforts were made to search out and punish those practicing witchcraft and supernaturally aided robbery. In Texcoco such crimes were tried by the religious

rather than the legal council. The Aztec believed that individuals lived to an old age by stealing life from other people, who as a consequence died young. As a result, elderly people were credited with possessing great supernatural power, and people treated them with deference in the hope they would steal life from someone else. A normal life span was considered to be one calendar round of fifty-two years.

In parallel with these early civilizations, the Harappan society must have practiced magic, sorcery, and witchcraft but in the absence of any written records it is hazardous to speculate its form. It is very possible that an extensive use of amulets, which is evident from a large number of charms and amulets found at almost all Harappan sites, was to protect against the acts of sorcery and witchcraft.

Shamanism: Shamanism is a form of religious practice that existed among preliterate prehistoric groups, including hunter-gatherers as well as the Neolithic agro-pastoral societies. Shamanic practices have been known to be quite prevalent in the whole of Central Asia, including Afghanistan. As late as thirteenth century A.D., we read how Babur, the first Mughal emperor of India but in reality a product of the Central Asian culture, circled around the bed of his dyeing son, Hamanyun, and by performing certain rituals transferred Hamayun’s illness onto his own body, thereby restoring his son to health and dyeing himself instead.Today shamanism is present, in one form or the other, all over the world, including the industrial world. It is especially prevalent in the whole Muslim world, especially Central Asia. India is especially rife with such beliefs and practices. As McEvilley (7) has stated:

“.... reflection of the stratification of different cultural-psychological layers in Indian religions in general: a composite primitive stratum of shamanic magic, totemic magic, and agricultural magic; possible fresh shamanic input from Central Asia at about the end of the second millennium BC (not to mention other possible outside influences); an overlay of Vedic ritualism in the middle Vedic period; and a general redefinition under the influence of idealist philosophy in the following periods...” He emphasizes that this ‘mixing of elements” cannot be limited by a purely chronological scheme; the characteristic of uneven development, which may be more pronounced in India than anywhere else in the world, has allowed this interplay of elements from various stages of religious history to continue to renew itself down to modern times (7).



A shaman or sorcerer at the cave of Les Trois Freres, France

In Pakistan, in its explicit form, it lingers on in some Makrani communities and in some areas of Northern Pakistan although some elements of shamanism are all-pervasive throughout the whole country in one form or the other. In 1970, this author witnessed an elaborate shamanic procedure in a Makrani community in Lyari (Karachi) the objective of which was to find out who was inflicting the client family with frequent illness through *Kala Jadoo*, as well as to block the effect of such acts for the future.

Shamanism is among the simplest faiths known, and it incorporates the two common denominators: belief in spirits and the practice of miracle-making (magic). It encompasses the belief that shamans are intermediaries or messengers between the human world and the spirit worlds. Shamans are said to treat ailments/illness by mending the soul. Alleviating traumas affecting the soul/spirit restores the physical body of the individual to balance and wholeness. The shaman also enters supernatural realms to obtain solutions to problems afflicting the community. Shamans may visit other worlds/dimensions to bring guidance to misguided souls and to ameliorate illnesses of the human soul caused by bad elements. The shaman operates primarily within the spiritual world, which in turn affects the human world. The restoration of balance results in the elimination of the ailment.



A shaman from the Hunza Valley, northern Pakistan - part healing, part fun

The practitioners of shamanism and miracle making (magic) believe that they can directly affect other humans and nature, either for good or for ill, by performing certain acts or uttering certain words. Shamanic magic differs from religion in that it is not concerned with regulating behavior in the society as a whole or with propagating a code either of conduct or of belief. It is concerned not with the totality of the invisible worlds, but simply with the individual's relation to the food supply and to his/her health. Shaman's magic operates through an elaborate system of taboos, hundreds of them, and some of them have far reaching social implications. The basic element of action or inaction is fear. In a society dominated by shamanic beliefs, it is not the question what one believes but what one fears. These people inhabit a world of anxiety, frustration, inadequacy, and vulnerability in which the spirits control everything that cannot be explained rationally.

In this respect, the shamans differ from the priests. It is also possible that a priesthood may emerge in an early state society, distinct from the figure of the shaman or specialist in ecstatic expe


A shaman from western Siberia

rience, who is able to reenter the primordial state with the aid of dance or drums, sacred trees or posts, fire rituals or drugs. The shaman is specially equipped to heal and to divine because he is one of the few in society who gains particularly intense experience of the sacred. Shamans are specialists only in the sense of being especially gifted persons able to commune with benevolent spirits. In ancient China it was claimed that the king could fly like a bird. According to Eliade (8), this was not a fabrication of an emergent ruling elite, but a reflection of existing shamanistic traditions. In the earliest Chinese states shamanism played a central political role, with the king himself as chief diviner and procurer of fertility, aided by other gifted individuals. Here shamanistic rituals involved the drinking of alcohol, the use of bronze vessels with animal motifs, and animal sacrifices.

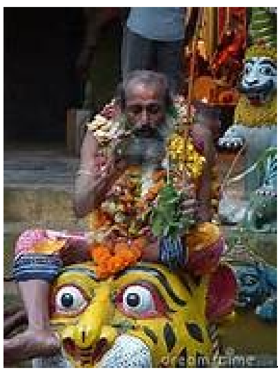
The priest is another kind of religious practitioner. He lacks the gift of speaking to animal spirits or entering a trance. He may represent the gods and be ritually pure, but he is not a medium. Priests conduct the ritual and guard the religious tradition through mastery of ritual knowledge. It is priests rather than shamans who are the 'full-time specialists'. In an early state there may be a hierarchy of priestly positions in order of power and sanctity, and a priesthood in this sense may well be possible

only in complex societies, although shamanism may continue to function.

Central to shamanism is animism, belief in the souls of animals, birds, plants or snakes, and a belief that these souls or spirits can communicate with living people. They do so through the shaman, a person with the rare gift of understanding them as he is able to journey into the world of the spirits - on the waves of frenzied drumming or clapping, on the spirals of smoke, or on the souls of sacrificed animals, by taking part in vigorous dance or by taking hallucinogenic substances. Shamans thus go into ecstasy or trance.

The structural significance of shamanism is that its context is typically a decentralized, diverse society that values individual autonomy and has few rigid rules or heavy institutional injunctions or boundaries. Unlike priests, shamans are not the main sacrificers or overseers of the detailed rules of ritual. They do not preside over harvest rites or *rites de passage* or bestow blessings for the afterlife. They do not lay down rules, for they are themselves unpredictable persons bound by very few rules. Shamanism is less suited to a classdivided society than an egalitarian ethos with social and cultural pluralism, linguistic diversity, and so on.

Shamans are in the business of going to the invisible world and contending with the spirits



A Hindu Shaman in modern India

on their own ground. In such societies living creatures, including trees, are important. Snakes slither between this world and the netherworld, and birds soar from this world into the heaven. Once a shaman allows a bird or animal to take over his or her consciousness, he or she may prowl

or prance or call like that creature. The shaman's helpers, incidentally, are often hybrid creatures, of which we find a number of examples on the Indus seals and tablets. While in the other world, they seek out cures for disease or drought. They are primarily mystics and healers whose powers are not acquired in this world but by crossing over into a world inhabited by souls and spirits. Such crossing transforms a person and gives him or her the power to heal - for it involves a new level of consciousness, a moving back in time to the primordial past or forward to the future.

The word shaman originates from the word *saman* in Tungusian, a language of one of the aboriginal Siberian peoples, and is derived from the Sanskrit *sramana* through the Chinese word *sha-men*. Shaman means "he, who is in ecstasy" and this ecstasy is the particular way in which the

**Ancient art of cowri divination in West Africa**

shaman establishes his contact with the supernatural powers. The ‘ecstasy’ can be induced by autosuggestion or by artificial means (drugs, narcotics, incense). It is an expression of the conscious or unconscious desires of the visionary. Trance states vary in quality and intensity from a fairly light trance to a deep trance with amnesia, which is very close to complete unconsciousness. However the different types may merge (6). There are thus four important constituents of shamanism: the ideological premise, or the supernatural world and the contacts with it; the shaman as the actor on behalf of a human group or individual; the inspiration granted him by his helping spirits; and the extraordinary, ecstatic experiences of the shaman himself (6). Such a description of the shaman is, however, restrictive and largely derives from ethnographic studies conducted on Siberian nomads.

The modern day shamans in the Middle Asia, especially in Mesopotamia, Iran, Central Asia, and Pakistan employ two other means: the special dreams which the shaman purposefully induces with the help of special diet (such as the meat of a black goat) and the use of some invisible beings, such as the *Jinns*, whom he controls and whom he can summon to his aid whenever he wants. What were indeed the vehicles or means of the Indus shaman, one cannot know. As stated before, the shaman usually employs animal spirits to probe the unknown. They may function as mounts during the shamanistic journey, for example, the bird for journeys through the air, the reindeer for land journeys and fish for voyages in the sea or rivers (6). In modern day Muslim societies, such as that in Pakistan, these spirits are generally the *jinns*, the invisible beings with supernatural powers. They function as informers for the shaman, (In Pakistan, the shamans are called *Aamils)*. There are good *Jinns* and there are bad *jinns, the budd-roohs* (bad spirits). Some *Aamils* control the good *Jinns* and some the bad ones. The good *Jinns* are *Aamil’s* helpers while the bad *Jinns* are the ones through whom the *Aamil* performs his ‘black magic’ for hurting the adversary of his clients. Exorcism is a common practice in modern Pakistan and Afghanistan. Here the shaman (the *Aamil*) communicates with the *Jinn*, or the evil spirit, who has ‘taken possession‘ of the patient and persuades him (or her) to leave the patient’s body. The shaman may adnce, he may do chantings of sort, he may make strange noises, or he may burn incense or pungent herbs to the discomfort of the bad spirit. Ultimately the possessor of the body leaves and the patient recovers from his or her ailment. We also see a lot of such drama in the performances of evangelical Christians in the churches of the United States.

Divination: Divination is the attempt to gain insight into a question or situation by way of an occultic process or ritual. Used in various forms for thousands of years, diviners ascertain their interpretations of how a questioner should proceed by reading signs or omens. Divination can be seen as a systematic method with which to organize what appear to be disjointed, random facets of existence such that they provide insight into a problem at hand. If a distinction is to be made between divination and fortunetelling, divination has a formal or ritual and often social character, usually in a

religious context while fortunetelling is a random, unstructured process. Particular divination methods vary by culture and religion.


A Mesopotamian amulet

ticed divination in daily life, both public and private. Scrying through the use of reflective water surfaces, hazy mirrors, or the casting of lots were among the most widespread forms of divinatory practice. Visions derived from hallucinogens were another important form of divination, and are still widely used among contemporary diviners of Mexico.

There is an ancient belief that dreams predict the future. The Atharvaveda, dated to the 5th century BC, contains a chapter on dream omens. A Babylonian dream guide was discovered in the ruins of the city of Nineveh among tablets from the collection of the emperor Ashurbanipal (668–627 BC). The Old Testament is rife with accounts of prophetic dreams, those of the pharaohs and of Joseph and Jacob being particularly striking. Among pre-Islamic peoples, dream divination so heavily influenced daily life that the practice was formally forbidden by Muhammad.

Prophetic dreams in the Middle Eastern cultures of antiquity often were combined with other means of prophecy, such as animal sacrifice. In classical Greece, dreams became directly associated with healing. In a practice known as temple sleep, ailing people came to dream in oracular temples where they performed rites or sacrifices in efforts to have a dream that would indicate to a cure. A similar ritual is common in modern-day Pakistan where a priest known for this art performs *Istekhara* (a dream for divine guidance).

Amulets and Talismans: Like magic, witchcraft and shamanism, the use of amulets and talismans was prac

ticed by all early civilizations. Their use is universal in all early civilizations; it is manifested all the way from Egypt to Mesopotamia to Central Asia and to the Indus Valley. Ancient Assyrians, Egyptians, Babylonians, Persians, and Hebrews placed great faith in amulets.
The use of amulets was

especially prevalent in Egypt, from where so many symbols emerged. In the New Kingdom a plot to murder King Ramesses involved smuggling into the palace wax images of the king that would help to ensure the success of the conspiracy. The frog protected fertility, Ankhs for everlast



Ancient Egyptian scarab amulet with wings made from faience *(Australian Museum)*

Divination is found in every age and country. Everywhere divination flourished and nowhere, even today, is it completely neglected. Cicero's words were, and apparently always will be true that there is no nation, civilized or barbarian, that does not believe in signs of the future and the persons who interpret them. Divination was a central component of ancient Mesopotamian religious life. Many Aztec gods, including central creator gods, were described as diviners and were closely associated with sorcery. Tezcatlipoca is the patron of sorcerers and practitioners of magic. In the Mayan *Popol Vuh*, the creator gods Xmucane and Xpiacoc performed divinatory hand casting during the creation of people. Every civilization that developed in Mexico Valley prac



A Harappan amulet, carved in carnelian in the form of a seal

ing life, the udjat [all-seeing eye or Eye of Ra or Eye of Horus] for health, scarab for resurrection after death. Amulets manufactured in a wide range of materials were purchased and worn by rich and poor alike. Most Egyptian amulets referred to and drew their power from episodes in the many myths that related how the young god Horus was protected from danger by the magical skills of his mother,

Isis, and how he finally overcame his uncle Seth. Spells, which often claimed to be ones that the Egyptian gods used to protect themselves, were written on small pieces of papyrus, which were worn by individuals, dipped into

water which was then drunk, or recited over someone. Special priests, sometimes wearing masks and equipped with boxes of amulets and charms, deployed supernatural powers to assist in childbirth or the curing of disease (12).

The Babylonians and Syrians used cylinder seals which were imbedded with precious stones. Hebrews wore crescent moons to ward off evil. The natives of Africa carried amulets consisting of a pouch or box of medicine such as fruits, plants, vegetables, etc. The people of Central Asia revered abstract symbols like Swastika. Some ancient peoples are known to carry the figurines of their gods as amulets. The miniature figurines of the Harappan Civilization probably served this purpose. The Yoruba used charms and incantations to counteract witchcraft, protect property, solicit good luck, shorten the distances they had to travel, avoid dangers, and make their enemies obey them. When building a new house the Yoruba propitiated malevolent local spirits in the hope that they would leave the new residents alone and apologized to good spirits for having disturbed them. The Inca regarded amulets as a form of protecting spirit.

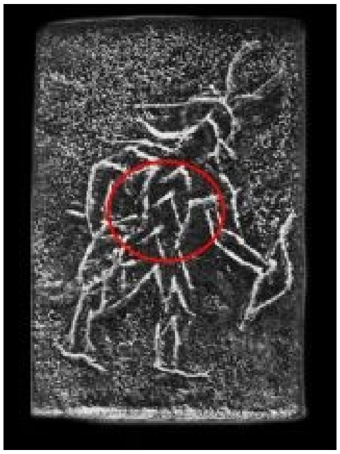
The Indus people wore on their upper arms steatite seals engraved with pictures of unicorn, zebu, water buffalo, and other animals and inscribed with some talismanic symbols. They also carried, probably in pouches, or kept in their homes, the molded terracotta tablets inscribed with ‘powerful’ figurees or mythical scenes, often accompanied by symbolic inscriptions. Bits of parchment with scripture quotes, carried in pouches or worn in necklaces as amulets are common in many modern cultures, such as that in Pakistan and Central Asia. There is a difference between a talisman and an amulet, although the two are often regarded as the same thing. Amulets are commonly manifest in the form of an enchanted pendant, a headband, bracelet, stick pin or brooch, medallion, or any of a large number of things. Talismans, on the other hand, are inscriptions; symbols, drawn upon another object to effect a change, attract good luck, or act as a warding of evil. A talisman is believed to have some occult potency for attracting some benefits to its possessor. If ethnographic studies are any guide, the efficacy and power of talismanic inscriptions and symbols vary with the media on which these inscribed symbols are placed. Many symbols do different things when placed on different metals, stones, or paper.

An amulet wards off danger, negative energies and misfortune. Sometimes a powerful talisman is believed to be capable of both attracting good luck and repelling evil. An amulet has always been used for protection, especially against the dreaded power of the ‘evil eye’. One can inscribe talismans on one’s favorite jewelry, such as the inscription on stoneware bangles and pieces of pottery discovered at Harappa. Other examples of talisman in the Harappan context are the engraved seals, molded terracotta tablets, and etched copper leaves. *Taweez* is an example of Talisman in context of modern Pakistan, the Arab world, Iran, and Central Asia. These are written symbols on a piece of parchment and generally carried in pouches as amulets. Originally, amulets were natural objects, but as civilization progressed amulets were fashioned into animal shapes, symbols, seals, rings, and plaques. These items were imbued with magical powers and inscriptions of powerful spells.

Amulets and *talismans* are usually carried for a required amount of time for absorbing one’s energies, and then burned, given to the wind, or sent down the river. They are not transferable from

one person to anther.

Magic, Witchcraft, Shamanism, Divination, and Amulets in the Harappan Civilization: Coming to the Harappan Civilization, Ratnagar (1) and During Caspers (2) contend that the archaeological material currently available to us presents a veiled picture of a simpler social component



A masked human figure with horns and clad in leaves scratched on a thin copper sheet from Mohenjo-daro, probably as shaman performing a hunting magic

dominating the belief system of the Indus Valley Civilization. Fundamentally this system seems to have been of a shamanistic nature and the role of the shaman as hunting magician features prominently in the Harappan iconography. This sort of religious system would seem to be much more 'at home' in a hunting-gathering society than in a relatively sophisticated urban environment but its remnants apparently remained intact for a long time. There is also the theory, although not universally subscribed, that the Harappan society was not as complex a society as we have been asked to believe; it was basically an argo-pastoral society with a strong component of huntinggathering culture. Religious beliefs are conservative and they tend to last to extraordinary time after they were originally formulated. It is, therefore, not surprising that the Late Paleolithic or Early Neolithic beliefs lingered on into the urban period of the Harappan society.

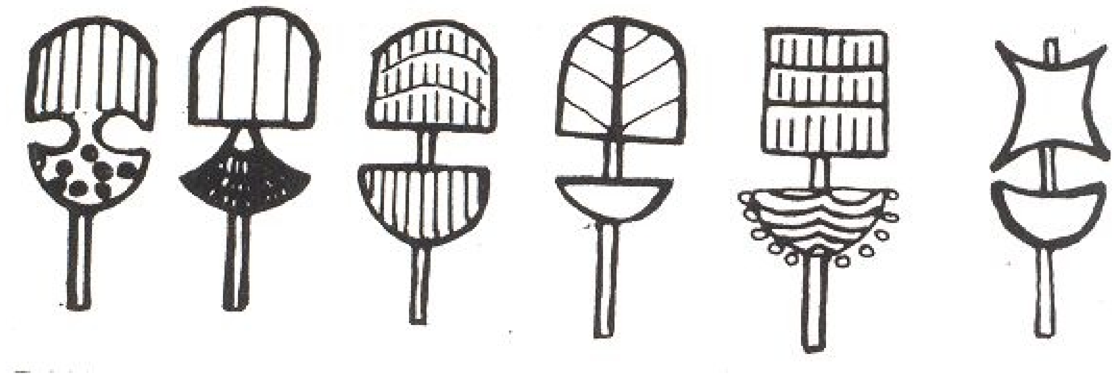


Three cases of a shaman communicating with the tiger

Shamanism in Harappan Society: Shereen Ratnagar is one of the most vocal voices advocating this hypothesis. There are hints of shamanic practices on the copper tablets of Mohenjo-daro and Harappa. These are small, very thin sheets of copper/ bronze on which are incised, with small, sharp tools, standardized inscriptions (a spells?) on one face, and perhaps a masked human figure with horns and clad in leaves/pelt, or an animal on the other face. Animals include the elephant, antelope, hare, rhinoceros, bull (with only one possible unicorn occurrence), plus some not easily identifiable ones. All tablets with the hare show the same inscription on their reverse. Unlike the

other animals, the hare of the copper tablets is not found on the seals, though there are a couple of clay figurines. A leaf-clad figure holding a bow and arrow is also frequently depicted. It may be a hunter in leaf clothing that enables him to get close to his prey, or a shaman trying to sneak into the forest to speak with a tree or animal spirit. Other material items which could possibly have an association with shamanic practice and thought are ivory rods with dot-and-circle incisions (also called divination sticks by some archaeologists), bone sticks, amulets such as shell ornaments, and drums depicted on one or two Bronze mirror seals.

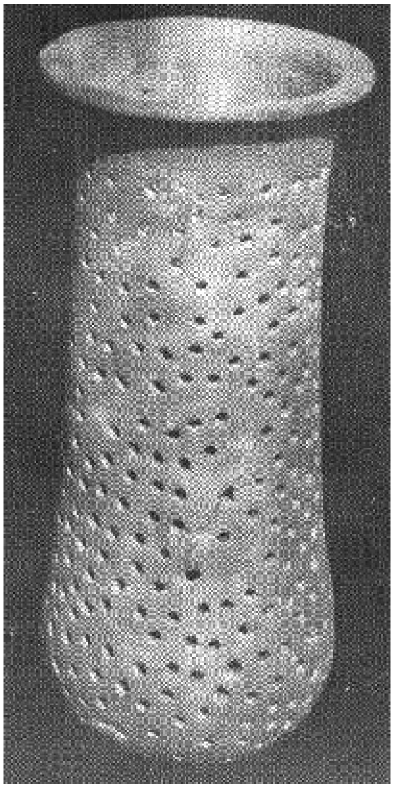
Of particular interest are the terracotta tab



The mysterious object in front of the unicorn on the Indus seals comes in several shapes and configuration: the above schematics are a few of them

lets, some carved but mostly molded, that show a stick-like human figure sitting on the limb of a tree, his (or her) arms stretched out, while a tiger looks on over its shoulders. It probably depicts a shaman communicating with the tiger in the jungle or simply presents a shaman overpowering the ferocious animal through his supernatural faculties. We also find the sketches of the hare on the copper platelets from Mohenjo-daro, the minute hare-shaped steatite tab lets from the earliest levels at Harappa, and the pres ence of rearing snakes on two of the 'shaman' repre sentations on 'sealing amu lets' from Mohenjo-daro. At the present it hard to say exactly what these scenes mean; future research may gain from a fresh, unbiased approach towards such aspects of the Harappan iconography.

We are reminded of



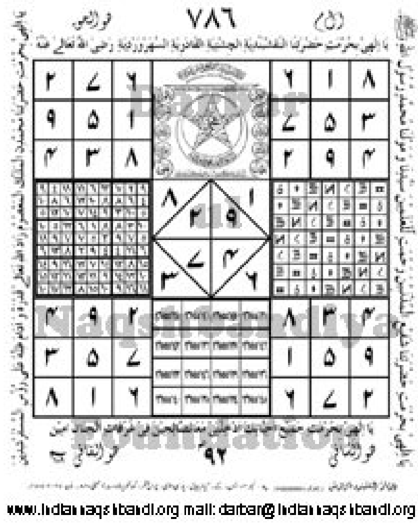
the tall, cylindrical Harap
pan pots perforated right
down their walls, and even
more of the 'sacred brazier'
or 'incense burner' almost
invariably shown with the
unicorn on the seals. In
shamanic practices incense

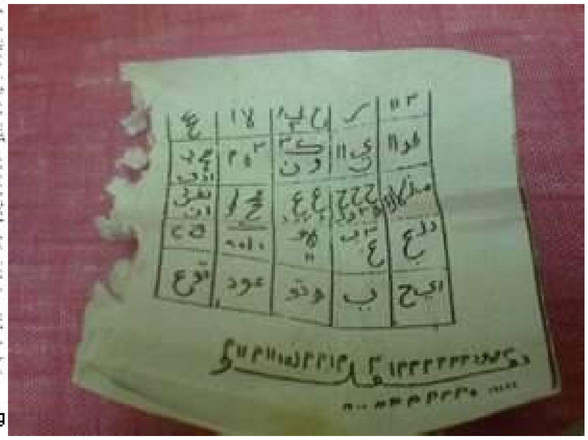
A perforated jar of some mysterious use from Mohenjo-daro.

Probably it was an insence burner used by the Harappan shamans

is commonly used to induce trance; in Central Asia and ancient Iran the smoke of hemp or *bhang* sent the shaman into mystic intoxication. It is known that some shamans in India inhale the smoke of burning fragrant wood to go into trance. The perforated jars and the so-called ‘sacred braziers’ could have served the Indus shamans for preparing their intoxicating beverage or for burning their incense.

In a hypothesis which During Caspers formulated sometime ago, she suggested the intrusion of an alien religious system from the North which continued to be practiced as a religious belief among the settled population of the Indus cities. On archaeological as well as on anthropological grounds, however, this chain of events would be unlikely. It is more likely that the religious ideas of a deeply conservative substratum of





Two samples of *Taweez* (Talisman) from modern-day Pakistan. Note the majic formulae in numbers and alphabets

the original hunter-gathers population were preserved in the argo-pastoral society, which was indeed the backbone of the Harappan Civilization.

During Caspers (2) connects the trees on Harappan seals and tablets (pipal or otherwise) with shamanic practices; it is these trees wherein spirits reside. The representations of trees, often portrayed as standing inside a railing or a round brickwork enclosure, or being the centre of a cultic/religious/ shamanistic performance seems to fit that notion. In case we do not want to resort to such abstract arguments, it may suffice to note that throughout India the *Bhoots* congregate in large and old trees such as banyan, the pipal, and the Indian fig trees while throughout Pakistan the *Jinns* tend to reside in acacia trees.

During Caspers' and Ratnagar's hypothesis about Harappan shamanism, amulets, and hunting magic has a lot of validity although it may not explain all aspects of the Harappan religion. Notwithstanding their disliking to connect the rituals of any modern religion to some aspects of the Harappan religion, we may not be too much off the mark if we derive some parallelisms with the Harappan evidence and the current shamanic practices in Afghanistan, Pakistan, and India.

Harappan Seals and Tablets as Talisman and Amulets: Equally important for our consideration is the use of amulets and talismans in the Harappan society. These have been common in almost all early civilizations and the Harappan Civilization could not be an exception. We have much more robust evidence for the widespread use of amulets than we have for the shamanic practices described above. The protective amulets could be objects such as beads of certain stones; marine shells, particularly shell bangles; terracotta minifigurines; and the like, but our attention wanders directly to the Harappan seals with accompanyed inscriptions, to the inscribed or molded script-like symbols, to the terracotta tablets depicting some myths, and to incised copper leafs with inscription, sometime accompanied by an inscribed animal sketch.

There are literally hundreds of symbols, which the Harappan used to inscribed their seals



A modern (19th century) silver case for carrying the Quranic talismans, from the Pashtun country of of Pakistan


Amulet necklace from Sindh, Pakistan



A Kuchi Taweezcarrying necklace from Baluchistan, Pakistan

and tablets. Some are simplistically drawn, generally representing vegetation, while others are intricately stylized, almost telling a story. Such sacred symbolism are quite common even in the modern world: for example, the cross in the Christian societies, trisula and host of other symbols in Hindu society, the impression of a hand among the Shia Muslims in Pakistan and the whole of the Middle East, certain numerals (such as 786) among Pakistani Muslims, etc.

Given such ethnographic pointers in modern Pakistan and central Asia, the widespread use of amulets and talismans are real and it is very well possible that the Harappan seals and inscriptions may have served as *taweez,* so common among the peoples of modern Pakistan and the middle Asia. These *taweez* or *talismans,* written on parchments, pieces of paper, on thin sheets of silver, or slivers of cotton fabrics, are “writing” in one sense but they may neither convey any mes


A twisted terracotta molded amulet from Harappa

sage nor encode any speech. Some of these *taweez* and *talismans* are just scribbling, some of them are not even that; they are just arithmetic formulations, i.e. some numerals arranged in certain orders. This parallelism, of course, does not mean that the *taweez* of today is an offshoot of the Indus seal amulet but it certainly furnishes a relevant perspective for understanding the possible usage of the latter. It also serves to shed light on the religious thoughts of the Indus people during the Harappan Civilization through a manifest historic continuity.

The Harappan seals are generally considered as an instrument of trade. The primary evidence for such a use comes from Lothal. Here, over a hundred impressed clay "tags" were recovered near a large house that had burned down, thereby baking and preserving the normally unfired sealings. The most common impression is the unicorn motif, followed by the elephant motif and some swastikas. Many sealings had stamps from more than one seal, and some had four different seal impressions. The animal motif of the previous sealing was usually obliterated by the subsequent impression, but in some cases the multiple sealings appear to belong to the unicorn group, as the tip of the horn is often still visible along with the inscription. These multiple sealings can be interpreted in two ways that have dissimilar implications for the organization of the Indus trade.

If we assume that the Harappan seals were used for sealing of goods by the merchants, then we must assume that the inscription was written messages and that the significance of the animal motifs, along with the written inscription, carried messages understandable to all the different communities living in the Indus realm. According to this scenario, the animal probably represented a specific clan or official as a totemic identification, and with it traits, such as power, strength, wisdom, etc. which may have been associated with each animal. Following this reasoning, scholars have identified at least ten clans or communities within the Harappan trade circle: unicorn, humped bull, elephant, rhinoceros, water buffalo, short-horned humpless bull, goat, antelope, crocodile and hare. Of these the unicorn may represent the most numerous and widespread clan.

There are several reasons not to subscribe to this theory: because of the sheer number of unicorn seals it is unlikely that they all represent merchants belonging to the same clan. Still, almost all explanations derive from this *a priori* assumption, which has become an article of faith among archaeologists and prehistorians alike. The statements like this are common: "........but perhaps the most important evidence comes from numerous clay sealings from a single elephant seal that were recovered from a buried storehouse at the site of Lothal. These sealings were attached to goods that were probably being traded by a merchant or landowner who used an elephant seal", or speaking about the multiple animals or a composite animal on two Harappan seal one prominent

archaeologists writes: “.....and both of these impressive seals may repre



sent a ritual or per
haps a treaty between
the main clans”.

The argument
against the use of the
seals in trade more or
less goes like this: If
the seals were indeed
an instrument of trade,
then one should expect
to find a large number
of sealings in large cit



Two small tablets from Harappa; probably serving as amulets

ies which were in fact the centers of trade. Contrary to this expectation, Mackay has noted that in trary to this expectation, Mackay has noted that in 1927 no seal impressions were found at all. In speaking of the corpus of impressed glyptic material from the site, he says: “It is not quite certain whether these objects should rightly be classed as seals only or as amulets, for the reason that up to the present there has not been found at Mohenjo-daro a single true sealing; that is, an impression on a piece of clay or other substance that had been attached to a jar or other article of merchandise, of the kind so well known at other ancient sites, where they were fastened to the object to be sealed by means of a cord, or else they bear traces on their backs of some fabric to which they were once attached.” This lack of data is not due to poor digging, since Mackay excavated several sites in the Near East, and he found many true seal impressions there, at Kish, for example. If seal impressions had been made at Mohenjo-daro, he would have found them there, too.

Another important observation regarding the function of the seals has to do with wear. Most of the Indus seals (not all) still retain the crisp edge of the original carving. They are unworn and clearly were not used to make many impressions, especially since the steatite from which they are carved is

the softest on the Mohs' scale of hardness, soft enough to be marked by a fingernail, even when baked and hardened. In contrast, the cylinder seals in Mesopotamia were intensively used and were consequently carved from hard stones: agate, crystal, lapis lazuli. There are many examples of Mesopotamian seals that were heavily worn from the taking of many impressions, even some that have been recut in antiquity to rejuvenate the scene and the written message. This fits well with the large number of seal impressions that have been recovered in archaeological excavations there.

Many Indus seals have rather heavily abraded outside edges, especially those directly adjacent to the face, but the interior carving retains a fresh, crisp line. This pattern suggests that the seal was wrapped in cloth or worn as amulets or used for visual identification. Whatever their use, it appears from these observations that the Indus seals were not used to make huge number of impressions, which in turn suggests that they may have been used for purposes other than trade.

A second trade-related use of the Indus seal, apart from their usage as the identifier of the merchant or his clan, and which is often repeated with frequency, is that the seals were employed to identify the goods and their quantities or numbers. But, the making of seals was a laborious and lengthy process and they could not have been made on short order. Additionally, a large number of Indus seals were mass-produced by the use of standard molds. These molded seals are not only of terracotta but also of copper and faience. Now, how different merchants could use the same seal for their trading activities or how the same merchant could use the same seal to identify his various parcels or bundles, is difficult to understand. The answer to their utility must lie somewhere else, away from the so far assumed trade activities.

The trade-related assumption for the use of the Indus seals and tablets has been changing in recent times and a strong opinion has recently started to emerge according to which the function of the Indus seals and the inscriptions on them

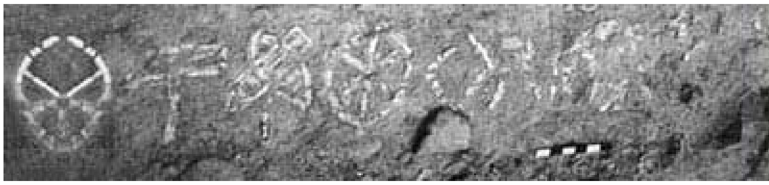


**A unique steatite inscribed unicorn seal with
a socket perhaps for attaching a lid, from Goalo Dhoro, Gujarat (India). The cavity was perhaps to hold a scent or, more
probably, a talisman.**

was similar to amulets and they had little to do with trade, personnel or goods identification, or authority. It is getting more and more evident that some of these 'seals' were not actually seals as they were not meant for sealing. A large number of them are merely shallow scratches on steatite or copper sheets, a large number constitute the miniature seals or tablets, incapable of being used as seals, and an equally large number of seals and tablets are multiple copies of a single specimen, generally obtained from a master mold. Finally, a majority of the Indus seals and tablets are not carved in negative as is generally believed but are positive inscriptions which would yield a negative image if used as a seal. The difference between the negative and the positive carving most likely represented how the particular seal was worn; the negatively carved (the intaglio seals) seals worn upside down (carved side touching the skin of the wearer) while the positively carved tablet worn upside up or carried in pockets and pouches.

In both cases, the Indus seals and tablets were most likely amulets or charms to ward off evil or bring forth prosperity to the owner. The incised or molded tablets were probably kept in houses while the seals with the boss could have been worn on person, most likely around the upper arm, just like the present-day practice of wearing the *Imam-Zamin* in the rural communities of modern Pakistan. If this be the case, the boss at the back of the seal most likely served for keeping the seal in place, the face down, pressing on the body of the wearer. This is probably why that one observes very little wear of the seal or the hole in the boss. The positive impression made by these intaglio seal on the flesh

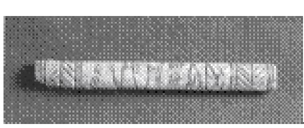
would serve the real purpose. The terracotta tablets and metal leafs, on the other hand, were inscribed in the positive, they need not press against the flesh to show their magical effect, and were most probably carried in pouches, pockets, or at left at home. The carefully carved intaglio seals were probably more effective and were most likely used by the elite.


A sign board at one of the gates of Lothal or probably a *mantra* to ward off evil?

In each case, the inscription on the seal would have nothing to do with the encoded speech, they would be some magical markings, akin to the potter's marks or the sacred symbols on *tweeze* currently in vogue in Pakistan and other Muslim countries. These marks, along with the picture of the carved animal, carried certain magical powers or they provided the carrier a degree of protection against some perceived dangers. Probably, each symbol represented certain blessings or invoked certain protective spirits. Certain inscribed symbols, or combinations of symbols, were presumably so popular that the seals with these inscriptions were mass-produced through the use of molds. In this sense, they were the mass produced generic *taweez* that are sold at several shrines of Muslim saints in Punjab, Sindh, and Baluchistan.

The use of the Indus seals and amulets for the purpose of imparting protection to the wearer, or for guaranteeing safe passage of the goods which were impressed by an appropriate seal, seems to be more probable and more in line with the wide-spread use of *talismans* in historic times within Pakistan as well as in Central Asia, Iran, and India. The presence of one or two examples of 'amulets' had, in fact, been noted by Mackay at Mohenjo-daro and a similar seal discovered later at Gola Dhoro in Gujrat, where the interior of the seal had been carefully hollowed out to form a compartment which was 'formerly closed by a sliding cover that fitted with grooves cut in the two sides of the seal' (see the figure).

Miniature tablets found at Harappa in large number have been recognized by Kenoyer and Meadow as amulets also. Ratnagar also seems to imply that the seals may have serve as amulets (in addition to their use in trade, according to her opinion) for warding some specific dangers off the person bearing the seal and afford protection to the goods on which an impression of the seal was affixed. It could also be serving as a general charm just as was probably done by the unicorn seal. In recent years, Steve Farmer, occasionally along with his colleagues, has taken upon himself to emphasize that the inscribed symbols on the Harappan seals and tablets did not represent an encoded speech but merely some auspicious symbols that served as *talismans*. Farmer seems to be a firm believer that the Harappan seals were nothing but amulets and the written symbols on them as *talismans*.


An inscribed ivory rod, probably a divination implement, from Mohenjo-daro

The predominance of the unicorn motif at the largest urban centers and its widespread distribution throughout the Indus Valley and beyond also strengthens this argument. If the unicorn indicated a particular clan, it would mean that the people belonging to this clan or trading community were not only numerous, but were present in every major settlement within the Indus Valley as well as in the

foreign lands. This also indicates that one particular merchant or his clan, as represented by the unicorn, would be prominent at Mohenjo-daro as well as Harappa or Kalibangan. Such a scenario is unlikely. On the other hand, the amulets or tokens carrying the blessed symbols could be available on a broader scale with no limitation of ethnic mix



A cubic dice found at Harappa, most likely used in divination



Polished bronze mirror from Harappa; a utility item as well as the part of shamanic paraphernalia for looking into the future. Similarly shaped mirrors, made hazy through a thin deposit of smoke, are also used for the purpose of divination in some areas of modern-day Pakistan

of the people or the geographic impediments. The elite of the higher standing could use the beautifully carved square 'seals' while the common man could get his satisfaction from a molded terracotta 'seal' or a 'tablet'. In the same vein, the shamans or the witch doctors could peddle their trade with the help of copper tablets or that of molded faience. Still poorer folks could be content with an impression of the negative seal on clay or dough.

Although the odds for the use of the Indus seals are largely in favor of nontrade applications, especially as *talismans* and amulets, their use on certain type of goods should not be discounted. Just like in historic times when bottles of perfume, honey, and essential oils were sealed with lumps of clay and a seal imprint affixed to verify the

contents and protect against pilfering or tampering, one can visualize a similar use of seals in the Harappan period as well. Similarly, we must not be dogmatic in denying their use as identifier. Such a use has been very common in the whole region in the historic times when personal letters, judgments of the court, the *firmans* of the royalties, the treaties between the states, solemn agreements between individuals, and the pronouncements of high officials were affixed with the impression of seals.

The efficacy of amulets in protecting the wearer Fr.om harm is a clear manifestation of the power of 'the word' or the symbol of something sacred. Looking from this angle, the inscriptions on the signboard affixed on one of the gates of Lothal could be nothing but a few sacred signs to ward off evil, for protecting the city from disease, invasion, inviting peace and prosperity, or all of the above.

Gemstones as amulets: Crystals and gemstones have been used as amulets in early civilizations. There use as such is common in modern societies as well. They were believed to possess intrinsic virtues which radiated their energies to its owner or wearer. This goes to the belief in animism, which ascribed particular 'soul' to particular object. Throughout Iran, Central Asia, and Baluchistan, turquoise was regarded as a 'protective' stone and was worn in ornaments. In Mesopotamia, lapis

lazili enjoyed this status. In these societies, the use of stone beads was of special significance. During the Harappan Civilization and its antecedent periods, certain stones were more popular than the others for manufacturing beads and certain textures of these stones were particularly valued. For example, a stone bead whose seams reflected the shape of an eye was of such a great value that the Harappan artisans took to etch this pattern on beads chemically.

Divination: Since divination was an integral part of ancient religions all over the world, we would not be far off to assume that the Harappan people indulged in these activities. As described above, there have been a number of divination methods in early civilizations but we do not have any definite idea of those that the Harappan people most likely employed. Archaeological evidence point to two possibilities, among other alternatives. The first is the rolling of dice. A cubic dice has been found at Harappa and a few others, oblong in shape, have been discovered at other Harappan locations. Whether these pieces were used for gambling or for divination is not known. Since such devices were extensively used for divination in Bronze Age civilizations of Mesopotamia and Iran, we would not be amiss if we draw a parallelism and assume that their use in the Harappan Civilization was present also. Along with the dice, we have one or two ivory rods, inscribed with lines and circles, that have been recovered from Mohenjo-daro. These objects are widely suspected as an instrument of divination in the Harappan society.

The second possibility is the use of hazy mirrors of polished bronze, frequently found in the Kulli region but also in Mohenjo-daro. Such hazy mirrors were the tools of divination not only in the Bronze Age civilizations in Middle Asia but also reported from Aztec and Mayan civilizations in the Americas. In Central Asia and Ladakh it is used to see the world or the soul of a dead person, or to 'open the door to the world of trance' and be a 'symbol of the world of Horns' that has to be transcended. Very similar mirrors, hazed with a layer of smoke, are used in some areas of Pakistan to identify a thief or the perpetrated of the black magic. Although to judge the past through the present is hazardous, this is relevant because the majority of mirrors found in Marshall and Mackay's excavations of Mohenjo-daro occur not on house floors or in street garbage or cached treasures, but in graves, signifying the divination aspects of these mirrors.

Shamanism and magic in Modern-day Pakistan: In its remnant form, shamanism is found throughout Pakistan where the belief in spirits is as common as it is in Afghanistan and Central Asia. The ability of an *aamil* (a Muslim shaman) to communicate with the *jinns* (the invisible spirits living among humans) to find lost property of the petitioner, or to solicit their help in changing the behavior of others (generally the husband, the mother-in-law and the sisters-in-law) is widely believed. These *aamils* do not claim to possess the knowledge of the unknown but they do have the means to do so by crossing over to the other world where they can communicate with the *jinns* or similar spirits. Some of these *aamils*, through their elaborate rituals, can acquire the capability of ordering the *jinns* to perform certain acts for the benefit of the supplicant. These acts could sometimes be extraordinary which could be construed miracle or magic. Some *aamils* use cloudy mirrors to see the future or know the unknown.

The practices of these *aamils* are quite similar to those common in the known shamanic cultures, i.e. loud music, monotonous drumbeat, incessant group clapping and chanting of meaningless words, smoke-filled dark rooms with incense burning, strange sounds, shrieks of wild animals including those of the birds of prey, etc. The shamanic practices in some of the Makrani communities, such as that in Lyari area in Karachi, comes close to the ‘classic‘ shamanism. Its manifestation in Hindu

communities in Sindh and Baluchistan is seen as a general belief in the power of *mantras*, *tantras*, and *jantras*.

Witchcraft is an integral part of shamanic practices. In most of the societies where shamanism has been documented, to violate a taboo is a sin. And sin creates disturbance or illness in soul. The illness can, however, occur of no fault of oneself; it may result from witchcraft purported by another shaman on behalf of an enemy. Witchcraft is thus an aggression for which a society has not provided other channels. An examination of witchcraft in simple societies around the world shows that it appears when people attempt to handle their vital problems in the absence of formal social controls. Witchcraft, like other manifestations of shamanism, is quite widespread in Pakistan, especially in small cities.

The surprising thing about witchcraft (*Kala Jadoo*) in Pakistani society is not that it exists, but that it is not much more prevalent. Its relative infrequency is due to the various social constraints, such as religious sanctions, public ridicule, prestige, the use of kinsmen in settling quarrels, tribal mechanisms for revenge and retribution, etc. Although these are not the same social controls as the laws, courts, and police familiar to the wellplaced people of Karachi, Lahore, and Islamabad, they serve somewhat the same function. The origin of the *Kala Jadoo* (the black magic) in Pakistan is commonly believed is Bengal and therefore Bangali witch doctors are actively sought.

The presence of ghosts around cremation places and graveyards, one being "under the shadow of an evil spirit", someone being "possessed by a *jinn"*, the concept of the spirits living in harmony with humans unless provoked in some form or fashion (mostly by violating certain taboos), the power of the sacred word, the widespread use of *taweez*, the amulets, the reverence for the spirits of saints and *walees*, wearing of certain stones for good luck or for warding off evil spirit, and host of such practices can safely be traced to shamanic practices of simple cultures. Whether these beliefs and practices are the remnants of the Harappan or even pre-Harappan societies, or an import from Central Asia in later times, cannot be determined. What is sure, however, is that the essential features of huntergatherers cultures of ancient times still lingers on in modern Pakistan.

Conclusion: It is often accepted that the religious beliefs of early civilizations were similar to those of later transcendental religions except that the idea of a single deity had not yet been developed. Instead, early civilizations postulated the existence of multiple gods who often acted at cross-purposes to one other. Classical Hinduism is often portrayed as a reflection of this imagery. On the basis of the work of Edward B. Tylor, it used to be assumed that still earlier there had been an animistic stage when the universe was believed to be pervaded by a supernatural power that did not yet manifest itself in the form of specific deities.

Trigger (5) has, however, shown that the religious concepts of early civilizations differed far more radically from those of later transcendental religions than nineteenth-century anthropologists assumed. Like band and tribal societies, early civilizations do not appear to have distinguished between what we perceive as the natural, supernatural, and social realms. It was in the beginning of the first millennium B.C., that the Greeks, the Hebrews, the Zoroastrian Persians, and various Hindu and Chinese philosophers differentiated the natural world, made up of plants, animals, and inanimate objects, which possessed only limited or no consciousness, the *soul*; the social world of humans, whose behavior was guided by goals, reason, and moral considerations; and the supernatural world of the gods, who for the first time were seen as existing apart from and independently of the natural

and social realms. The world of preliterate societies was the world of spirits, magic, witchcraft, shamans, divination, and the like. In spite of developing a high level of material culture, the Harappans seem to live mentally in the world spirits and shamans, talismans, and amulets.

In this chapter we have attempted to draw together some evidence from disparate sources to construct a hypothesis about the magicoreligious system in Harappan times. Taking into account such features as the ideograms in the script, graphic representations and archaeological remains, it has been possible to present a cogent argument for the existence of a belief system that heavily relied on invisible spirits which resided among the people and away from the people. These spirits could be humanlike or those of wild animals or even of natural objects, such as rivers and mountains. We also argued for the extensive use of the amulets and talismans, which we commonly identify as 'seals' and 'tablerts', by the Harappan society. Comparative studies from contemporary civilizations also point to this direction.

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Chapter II.5.

Harappan Heritage - Hinduism and Folk Religion of Pakistan



This chapter deals with Hinduism having its roots in the Harappan religion. This is a topic that is immense on one hand and a senseless on the other. It is immense because so much has been written and is still being written about it that it is not

possible to review it to any degree of satisfaction. Anyone who is able to write something and is willing to spend some time to satisfy one's ego takes the pen and spews a heap of garbage without having the least concern about the evidence to support one's contention. The corruption of history continues unabated and all this goes on with the support of the Indian governmental and academic institutions in the name of "cultural nationalism". It is senseless because the onslaught on history is so intense that it is no longer possible to stem this tide. In view of this frenzy the western researchers who were traditionally have been quite interested in the study of the glorious tradition of Hinduism and the cultural development in the subcontinent have stopped to ponder over the ancient history of this region. There are, no doubt, some valiant souls within India who are trying to impede this Hindutva tide but many of them have already been stopped in their tracks through character assignation, innuendoes, name-calling, and branding them 'marxists', even anti-Indian. The rest of them are now tired of fighting this flood of nonsense; they have probably realized that they are fighting a losing battle and is therefore senseless to resist any longer.

There are six interrelated elements to this discussion. First, the 'truth' lies in the Vedas, especially in the RgVeda - the bardic songs of a pastoral tribe which have been transmitted orally, unchanged, to the time of their putting down in writing only a few centuries ago. Second, the songs of the RgVeda were compiled *before* the flowering of the Harappan Civilization, probably in the fourth millennium BC or even earlier, instead of the universally recognized time period *after* the demise of the Harappan Civilization, around the beginning of the second millennium BC. Third, the 'Aryans' were indigenous to India, most likely to the Indo-Gangetic Divide, and thus the Harappans themselves. Fourth, the Harappan was a Vedic civilization and the RgVeda reflects the culture and religion of that civilization. Fifth, the foundation of Hinduism is RgVeda. Sixth, since the Harappan Civilization was Vedic, the roots Hinduism must be found in the Harappan Civilization. The Indus archaeology must furnish the evidence and since RgVeda is the ultimate truth, the archaeological evidence must conform to whatever could be gleaned through the good book. If it does not, then one should ignore the material evidence.

All this is heady stuff but it is not our concern here: we shall postpone this discuss to Section V. Here we want to deal with a mundane, although related, subject: the heritage of the Indus religion in the modern day Hinduism and the folk religion of Pakistan, or, conversely, searching the roots of

modern Hinduism and Indian Islam in the Harappan Civilization. This is different from the Aryanization of the Harappan Civilization to be discussed later as it constitutes a legitimate subject of enquiry.

Harappan Religion a Precursor of Hinduism? As the foregoing discussion in the present Section may have indicated, on historical level, Indus religion has been frequently studied with reference to Hinduism, superimposed on the background of Greek mythology that underlay the educational foundation of early archaeologists. This starting point, the superimposing the Hindu mythology over the Harappan archaeology, has had a negative effect to the understanding of the subject.

In Chapter II.2 it has been explained at length how Marshall and Mackay staked their scholarly reputation on the notion of the Harappa religion based on certain gods and goddesses, in line with those of Mesopotamian Civilization. The worship of a universal Mother Goddess, in line with the later day Hindu goddess, Shakti, was conjured up and a male god, a porto-Siva, effortlessly evolved. This description of the Harappan religion was since then repeated so many times by other archaeologists that it became almost a fact. It also echoed in the writings Sir Mortimer Wheeler. When Wheeler published a major book on the Indus Civilization, he devoted a little more than three paragraphs to a section entitled "The Indus Religions" (1). Embedded in his text, he spoke of nude female Great Mother Goddesses; statuettes representing "gods", one of whom was a legendary Priest-king, like those in Mesopotamia and the seated Siva, “replete with the brooding, minatory power of the great god of historic India" (1), and nude gods or goddesses standing in a pipal tree "with seven clothed ministrants engaged in a ritual dance," (1). In a section describing the city plan at Mohenjodaro, he referred to the Great Bath as the site of public ritual ablutions, again known from the laterday Hinduism, describing the entire complex of the ‘citadel’ as the seat of religious life for the city (1).

Although Marshall, Mackay, and Wheeler referred to the Indus religion as a melange of influences, it was to Hinduism that they returned in their deliberations, suggesting that an "Harappan mentality" anticipated its later religions, meaning Hinduism. This image of a substrate philosophy linking the Indus to Hinduism has been pervasive in reconstructions of the Indus Civilization and have contrived a religious beliefs system at once the Harappan and the Hindu. In these analyses, even the system of authority has been subsumed to the system of religious beliefs. A sociopolitical organizational setup therefore effortlessly evolved; it was based upon an ideology in which one’s social class or stage of life was the moral order, each individual fulfilling "the purpose for which one was given that place originally" (2). In such a caste-based society, power lies masked behind a veil of tradition that lends the moral base.

Marshall concluded that the great numbers of female terracotta figurines were popular representations of the Great Mother Goddess; and he drew parallels between this evidence and the ubiquitous cult of goddesses, particularly that of Paravati, the spouse of Siva, both throughout modern India and in Indian classical literature. He further postulated the presence of a great male God, whom he identified with the later Siva, who shared many of his attributes. A major assumption in his thinking, as pointed out by Ratnagar (3), is evident: for the interpretation of Harappan symbolic objects Marshall was looking to Hinduism, which was, after all, the one clear frame of reference available to him. He saw the headdress on '*Pasupati*' seal as a *trisula*, whereas later scholars said the headdress was a pair of buffalo horns. It is obvious that he drew parallels from the clusters of varied religious practices that could be collectively designated as 'Hinduism'. In Marshall's own words:

“All the material of religious nature recovered at Mohenjodaro and Harappa appears to be characteristically Indian. Although, relatively meagre in proportion to the extent and importance of the sites, this material is sufficient at any rate to make it clear that iconic and aniconic cults existed side by side, and were just as compatible five thousand years ago as they are in Hinduism today. It exhibits to our eyes, on the one hand the worship of the mother goddess, who still occupies a foremost place among the teeming village population of India; and side by side with a god whom we have seen a good reason to recognize as the ancestor of the historic Siva, the principle male deity of the Hindu pantheon. On the other hand, it shows us the worship of animals and trees and inanimate stones or other objects in much the same form as it meets us in the historic times in semi-human, at others in syncretic and fabulous shape. Trees, too, are worshipped in their natural state, but their indwelling spirits are already completely anthropomorphized. Linga and *yoni,* both have their places in religious scheme, as they have in Saivism and along with these emblems are other stones, apparently of a baetylic nature. Chremanthism exemplified in the worship of the sacred 'incense-burners', amulets and charms are common, attesting to the existence of the demonophobia with which Hinduism has always been incurably afflicted. And there is evidence that Yoga was always playing its part as a religious practice.” (4).

Marshall went on describing, although very cautiously, the proto-Siva, Mother Goddess and the presence of *lingam* and *yoni* as emblems of their creative powers. He drew attention to the Indian philosophy of dualism known as *Sankhya Darshan,* which led him to believe that the Harappan proto-Siva and the Mother Goddess manifested the abstract concepts of *Purusa* and *Prakrti* of a much later philosophical thought.

The picture so created by Marshall was at the most a working hypothesis but in the ensuing arguments, this fact was either totally forgotten or disregarded by the archaeologist and Indologist alike. Hence, what we got to see of Harappan religion is a fuzzy picture, through which one can have glimpses of the present-day religious practices in India, commonly called “Hinduism”. It also gave an impression that the Harappans who otherwise comprised a very organized urban population were least concerned with organizing their religious life. The result is that the understanding of 'Harappan Religion' has remained entrapped in controversies and a clutter of academic perspectives treating individual components of the system by isolating them, especially in the pursuit of searching Vedic parallels.

The later scholars threw overboard every caution that was presented by the early scholars. They adopted this theme and shaped it by incorporating into it a host of other modern-day Hindu elements. We quote Allchin and Allchin, as an example of this thought process.

“We are of the opinion that the stone cult icons, and probably also the temples, were dedicated to this same deity. One of the most significant representations is to be found on a series of seals. These show him seated in a Yogic posture, upon a low throne flanked by wild goats, and wearing a great buffalo-horned headdress; he is ithyphallic, he has perhaps three faces, and he is surrounded by jungle creatures, a veritable Lord of the Beasts. In several instances he has a sprouting plant emerging between his horns. Everyone of these features can be found in the descriptions of the Siva of later times. Moreover, stones identical in form to the *lingam*, the phallic emblem of Siva, were found in the cities”. Lo and Behold! Hinduism is proven to be a religion of antiquity and the Indian civilization is shown to have its roots in the millennia past, even before the Vedas themselves were composed” (5).

An undue emphasis has been put on the world of gods and goddesses, images of animal and human sacrifices to these deities, and the cults of fertility and the origins of the belief system of modern-day Hinduism and the ritualistic elements in some long-lasting social traditions have been unabashedly sought in the Harappan tradition. For example: "Initially the evidence for phallic emblems, the depiction of pregnancy, the unusual seal from Harappa in which the birth of a plant is depicted, a find in a storage jar at Harappa of a *lingam*, the prevalence of representations of bulls and human females, and the apparent sacrifice of animals or indeed of humans to a deity intimately connected with vegetation strongly suggest cults related to regeneration, the cults of fertility. At maturity the formal processions, the ablutions of the Great Bath, the priesthood suggested by the sculptures and the 'citadel' structures, the use of masks and horned headdresses, the iconographic elements such as the man-tiger and bull or goat figures, the tree deity, the 'Gilgamesh' motif, the painted or decorated animals on the seals, the enthroned figures before which individuals kneel, etc. relate to a complexity of myths, animism, ceremonial preparation, and formal rites to a variety of powers." So wrote Bridget and Raymond Allchin (5) in their moment of exuberance. Such examples of animated generalization are abundant and we come across them at every step of the enquiry. These scholars look at the Indus seals, hearths, shapely pieces of stones, and the like, and see in them a religious quality that was the Harappan Civilization and at the same time a reflection of Hinduism. Some of this evidence is difficult to ignore but a lot more of this falls into the category of 'you see what you want to see'.

As though the ongoing romanticism of the western scholarship with the antiquity of "India" and the deep roots of its "living civilization" in the very distant past of the Indus Valley was not enough, a number of recent scholars, almost all of them from India, found this ready-made scenario handy for proving the unbroken religious continuities from Harappa into the later Hinduism. These authors enthusiastically point to everything Harappan and connecting it with modern or historical Hinduism. The effort is to seek the origin of Hinduism in the Harappan tradition and view the motifs on the Harappan seals, the painting designs on pottery, terracotta and faience figurines, and some aspects of public architecture, mainly the Great Bath of Mohenjodaro, in light of the current practices of Hinduism. Some Vedic scholars are trying to unload the Vedic beliefs and rituals wholesale on the Harappans, even describing the Harappan as the "Vedic Aryans". There are also some anti-Brahmanical scholars of India, who reject all these thoughts but ironically ascribe a Buddhist or Jain type religion to the Harappans to prove the antiquity of their own religion.

The ostensible connection of the modern or classical Hinduism with the Indus Civilization, through the intermediary vehicle of *RgVeda*, is being regularly emphasized in the literature coming out of India and some of its tenets have already begun to be accepted as historic truths. For example, a recently published book on Harappan Civilization states without any qualification; "Some of the figures are smoke-stained, and it is possible that oil, or perhaps incense, was burnt before them in order that the goddess might harken favorably to a petition" (Note the attempt for introducing idol worship to the Harappan religion, and that too in the form of Hindu *pooja*). "Figurines similar to those in the Indus Valley are found in many countries and around wayside trees and village shrines in South India" (Note again the connection of modern idol worship of Hinduism with the Harappan culture). "Mother Goddess is represented in every village as the tutelary deity and is known under various names, such as Mata, Amba, Amma, Kali, Karali, etc., sometimes to be dreaded, sometimes warding off evil spirit, sometimes imparting fertility, etc. It may be mentioned that *RgVeda* refers to Pirthvi and Aditi which are akin to the Indus Mother Goddess" (Note the sweeping connection between the classical Hinduism to the Harappan religion through the *RgVeda*).

The problem with such an approach is obvious: such ultra-nationalistic or sectarian tendencies are already distorting the history of the subcontinent beyond recognition, and this is being done under the umbrella of scholarship. In this process, the Indian scholarship itself has gravely suffered. Furthermore, as Shereen Ratnagar has put it, it denies Hinduism a history, a sequence of change and new elements; In fact, this approach, by insisting on all features of Hindu religious practice being already present in the third millennium, cast Hinduism in the framework of 'primitive' life, ignoring its rich intellectual history.

These frequent references are the product of a general bias toward a tendency of western as well as the Indian scholars for implicitly assuming that the modern Hinduism sprang out of the Harappan tradition. In some ways, this tendency is an imperative for the understanding of the Indus religion in the absence of any written account or a lack of very clear archaeological evidence for the abstract. Since we see a continuity of several material traditions of the Indus Civilization right into the modern times, the assumption that some abstract beliefs, rituals, and superstitions could also have lingered on into the modern times is not far fetched. But the problem is when this becomes the only approach and when other evidence is pushed aside to accommodate the 'truth' seen through the prism of the later-day Hinduism. Many Indian scholars seem to insist that the Harappan religion can be understood only through Hinduism. For example, Chakrabarti (6) unabashedly proclaims: "..... if the Harappan religious beliefs should not be viewed through the lens of later-day Hinduism, by which lens should it be viewed? After all, this is the lens through which the first major report on the Indus civilization tried to make sense of its religious beliefs. They should also be aware that the attempt to relegate Hinduism to the status of just another 'immigrant' religion in the subcontinental context has a long history and different modern manifestations, including the one which denies Hinduism the privilege of being a single religion and ascribes its current status as the majority religion of India to the decision of the British census operators not to classify people according to their Saivite, Vaishnavite and myriad other affiliations." There are, of course, other such proclamations that now clutter the Internet but coming from an otherwise recognized, although controversial, scholars like Chakrabarti is alarming. There is no ideological reasons to resist such tendencies but they go against the spirit of scientific enquiry. Archaeological evidence, whenever and wherever it is available, must take precedence to some unspecified and unrelated ethnographic pointers.

Marshall's interpretation of the religion of the Harappan culture has been accepted almost universally and has greatly influenced scholarly understanding of the historical development of Hinduism. Some scholars, however, feel compelled to question whether the archaeological evidence fully supports all of Marshall/s hypotheses and whether there might not be other equally, or even more, plausible interpretations of some of the finds. The last two chapters reviewed some of these alternatives, here we examine only those material symbols upon which Marshall based his ostensible connection of Hinduism with the Harappan religious life.

First, there are a number of terra-cotta figurines of a standing female, whom Marshall regards as representations of the Great Mother Goddess who was absorbed into later Hinduism and transformed into the figure of *Sakti* and whose worship is seen today in the cults of the village goddesses. In support of this supposition Marshall cited an oblong seal from Harappa depicting a nude female upside down with legs apart and a plant or tree growing from her vulva. The intention of this scene would seem to be that of showing the production of vegetation from the womb of Mother Earth. Marshall's supposition that a goddess of fertility and vegetation was worshipped in the Indus is further supported by a number of seals from Mohenjo-daro depicting the manifestation of a tree deity.

We called it a “A Pigtailed Deity in Chapter II.3.

But why should we assume any cult at all? Why need they symbolize fertility? Or even if they do, why should fertility have to be ritual? Asks Ratnagar (2). Not every image is symbolic; not every woman is a goddess. The "prominent and clumsily applied breasts" of these figures have been taken as evidence that they were "fertility symbols,"but they may have been valued simply for what P. G. Wodehouse's Bertie Wooster used to refer to as a "wonderful prafile." Big breasts are as useful to Courtesans as to goddesses. Are the buxom centerfolds of *Playboy* magazine fertility symbols, or the voluptuous women that Rubens loved to paint?

Scholars have seen connections between the alleged Lord of Beasts and a goddess, particularly the Hindu goddess who rides on a lion; some connect the tiger on the seals with Hindu goddesses of a later period or with goddesses of ancient Egypt, the Aegean, Asia Minor, and the whole of West Asia, who were thought to consort with lions, leopards, or panthers.The assumption that the figures of women found at the Indus sites are goddesses is then used to support the argument that the goddesses in laterHinduism - or the minor Vedic goddesses, Yakshinis and Apsarases, associated with trees and water - may be traced back to this early period.

Hindsight speculations about fertility sects associated with female figurines, the bull, the horned deity, and trees like the sacred fig (pipal) are tempting.The seal with the person emerging from the middle of a fig tree may or may not prefigure the later Indian iconography of fig trees and banyan trees. But it is going too far to interpret something so straightforward as a grave containing a male and female skeleton as "possibly the first indication of the well-known Hindu custom of *sat*i" (live widows burning themselves to death on their dead husbands' cremation pyres or entombing themselves).The couple may simply have been buried side by side, whenever they died.

Some of the figures of well-endowed women are "curiously headless," and in some cases of actual adult burial the feet had been deliberately cut off, a fascinating correspondence, perhaps joined in a Procrustean syndrome. These headless female figures may foreshadow the headless goddesses who people later Hindu mythology, such as the Brahmin woman who exchanged head with the Pariah woman. (Or is it just that the neck is the thinnest part of such figures and most likely to break?) The prevalence of images of women may well indicate "a greater social presence of the female than in later times, which may also have been a generally more assertive presence.

Marshall’s case for the Harappan prototype of Siva was built largely upon a single seal, the Seal 420. Briefly stated, Marshall’s reasons for identifying this figure as Siva or his prototype were:
1) The Indus deity is depicted as three faced as

Siva himself has been in classical Hindu art; 2) the yoga-like attitude of the Indus deity re minds us of Siva’s reputation as *Mahayogi*; 3) The company of wild animals around the Indus figure suggests Siva’s role as *pasupati*; 4) The horns and headdress of the Indus figure are probably not only a sign of divinity but also the source of the later Siva’s important emblem, the *trisula* or trident.
That the figure is a deity may be supposed from the headdress of horns - commonly a sign of divinity in archaic religions. But is it a male deity? We have already presented arguments in Chapter II.2 to say that the figure is possibly a female. Marshall stresses the fact that the figure has three faces as further indication of its being the prototype of Siva, who in classical Hindu iconography is often depicted with three or even four or five faces. But does this figure have three faces? As we discussed in

Chapter II.2 , there are serious doubts that it does. In fact, some archaeologists do not see even one face: it seems to be an animal mask. There are several other seals and tablets on which this horned deity is depicted; in all, except possibly one, only one face is discernible. As for the yoga aspect of the figure, a number of researchers interpret this sitting posture as natural which need not be a yogic posture at all. Furthermore, it has been shown that yoga was not the invention of the Harappans; it appears in India quite late in history.

There is a general resemblance between this image and later Hindu images of Shiva. The Indus people may well have created a symbolism of the a divine phallus, or a horned god, or both. But even if this is so, it does not mean that the Indus images are the source of the Hindu images. We must keep this caution in mind also when we consider the images of women in the Indus Valley. The theoretical implications are enormous. If these remains are considered porto-Siva, then the Indus Civilization becomes a valid source for the interpretation of any later development in Saivite thought and art. Moreover, an *a priori* condition is established whereby subsequent interpretations must take into account and harmonize with the proposition that the Siva-idea originated in a non-Vedic culture which precedes the advent of the Hindu tradition. To state it another way, Siva as yogi, Siva as the erotic god,, Siva as *Nataraja*, Siva as *Pasupati*, and Siva as *Linga*, all would trace their origins to beliefs conceived outside of Hindu tradition (7).

The widespread misconception that postural yoga arose in ancient India or in the Indus Valley persists despite a large body of recent research that confirms that postural yoga was unknown in India before the middle ages — and, even more importantly, that most of what are commonly viewed as "ancient" *asanas* and all *asana* sequences are modern inventions, arising in late colonial times from fusions of Indian and Western practices, including European body building and gymnastic traditions that were wildly popular in India as well as in the West in the late nineteenth and early twentieth centuries (8). Most of what is known today as "traditional yoga," ironically even those styles practiced with nationalistic fervor in Hindu yoga camps throughout India, cannot be traced back further than the 1920s and 1930s, and owe as much to Western as to Indian traditions.

Farmer (8) shows how misuses of textual and iconographical data of a type common in studies of comparative mythology have enabled the backdating of *asana* practice to 3000 years or more before its first appearance in India, resulting in gross misreadings of mythological images from the Indus Valley that have not only contributed to popular distortions of that history but have equally obscured key facets of Indus myths critical to understanding this region's earliest urban civilization. Farmer (8) argues that the twisted tale of postural yoga provides an instructive case study of methodological problems in comparative mythology, in which far-reaching conclusions are often drawn from unreliable data and grossly misdated sources. Striking (if equally spurious) pictorial evidence is shown from ancient Egypt, China, and Mesoamerica that ironically could be used to argue far more persuasively than any suggestions from the Indus Valley that postural "yoga" appeared elsewhere in the world thousands of years before it did in India.

Claims are common in popular and even scholarly studies that postural yoga or *asana* practice can be traced back thousands of years to early Vedic or even Indus culture, as described above. In recent years, V.K. Gupta, head of the Traditional Knowledge Digital Library, an official agency of the Indian government, in fact made global headlines when he claimed that his agency had catalogued more than 900 yoga poses supposedly culled from ancient texts by experts from nine Indian yoga traditions; the aim of the catalog, Gupta is quoted as telling the Washington Post, was to deter anyone from claiming for private gain that he had invented "a yoga posture which was already created in 2500 B.C. in India" (8).

The Great Bath at Mohenjo-daro is another object that has been offered to show the connection of Hinduism with the Harappan Civilization. Ritual bathing is an important element in modern Hinduism.

Ritual bathing is supposed to be taking place at the Great Bath as a part of a state religion. Well, all that structure tells us is that the Harappans at Mohenjo-daro liked to bathe, just to get clean or to cool off on hot days or to splash about, just as we do. The great attention paid to the sewage system in the IVC suggests a hardheaded approach to hygiene (unless, of course, one wants to view the sewers as sacred underground chambers). Why does the bath have to be a ritual bath? The answer is simple enough: because the so-called Great Bath resembles the ritual bathing tanks of Hindu temples that began to appear in the subcontinent in the first few centuries AD and because such a tank reflects a concern with ritual purification through water, an important idea in Hinduism. Four thousand years later, indeed, every temple has its tank. Therefore, the argument goest, the tank must have served the same function in the Harappan Civilization. Similarly, the so-called College of Priests in Mohenjo-Daro has been taken as evidence for the existence of a widespread priesthood. Well, it's a big building, true, but why couldn't it be a dorm, or a hotel, or a hospital, or even a brothel? Or simply a place to meet.

Siva’s *linga* is still another item that connects Hinduism to the Harappan Civilization. It is impossible to say just how many of the phallus-like stones found at the Indus sites were actually lingers or just elongated stones used for diverse purposes. Why every elongated stone or a conical terracotta object has to be a *linga*? And even if it could be safely assumed that ‘phallus worship’ was part of the Harappan religion, this would not argue for the cult of prototypal Siva. As has been shown in Chapter II.2, the association of the *linga* with Rudra-Siva appears quite late in the development of the cult, for it does not occur in the Vedic literature and evidently had not yet become a cult symbol by the time of Panatela (second century BC). In fact, the earliest known Sivalingers - one found at Gudimallan and the other at Bhita - are datable from the first century BC. When the Rudra-Siva cult did acquire the *linga* symbol from the non-Aryan phallus worshippers mentioned in the RgVeda, it was incorporated into a philosophy which greatly devoided it of its original sexual or phallic significance (9).

Efforts have recently been made by some Indian archaeologists of Hindutva leaning that a fire cult existed in the Harappan religious practices and that fire, in fact the *Agni (*the Vedic god of fire*)*, was one of the Harappan deity. Some oblique archaeological evidence was offered by B.B. Lal and since then the idea has been uncritically repeated by a host of ‘Vedic scholars’, even by some western archaeologists of repute, so frequently that it has become almost a fact. The evidence is, however, tenuous at best and misuse of archaeology at worst.

Small clay-plastered pits have been found at Kalibangan, Lothal, and Bananwali (all in Imdia), in public places as well as within some houses. These have been described by B.B. Lal and S.R. Rao as ‘fire-altars’. They were presumably used to burn the animal sacrifices and send them to the desired deities through *Agni* (fire) as the messenger. These discoveries are often cited to prove that the Harappans had a religion similar to the RgVedic people, or that the Harappans were the RgVedic Aryans themselves.

These “fire altars” were first uncovered at Kalibangan, where one of the platforms in the southern part of the citadel had a row of seven oblong clay-lined pits containing charcoal, ash, and terra-cotta cakes; such cakes were used in kilns to retain heat and perhaps had a similar function in these fire pits. In one pit there was also a cylindrical clay stele. B.B. Lal, the excavator at Kalibangan, claimed that the “fire altars” complex must represent a civic ritual center where animal sacrifice, ritual ablution and some sort of fire ritual featured. The shapes of these ‘altars’ are not clearly indicated. The excavators also noted that in the houses of the lower town, apart from the normal domestic hearths and ovens, one room was set aside for a similar fire altar, a feature which is strikingly suggestive of the 'fire room' of late Vedic and later Hindu tradition. This, therefore, one may interpret as representing a domestic fire ritual or worship. There was also a third context in which these fire altars were found in a small brick-walled courtyard outside the lower town towards the East. Here

several ‘fire altars’ were discovered along with pits containing ashes, but no other structures. This may be interpreted as another ritual center, belonging to the lower town and perhaps of lower hierarchical importance than those of the citadel, recalling the existence of Hindu-like caste system in the Harappan society.

The distinction between fire altars and domestic hearths is not always clear. Excavations at Nausharo have uncovered similar structures in a domestic context where they are interpreted as hearths, albeit of an unusual type; these bore some resemblance to the hearths used by the later inhabitants of the Deccan (India), which sometimes had a central clay support for pots. This therefore begs the question whether the domestic "fire altars" were in fact ordinary hearths or, conversely, whether all domestic hearths could have been used in family worship as well as for cooking. Alternatively, do these ‘fire altars’ have anything to do with any religious ritual or are they simply cooking hearths. The excavator, B.B.Lal, does not express his opinion clearly.

The same set of artifacts that Marshall selected to base his evidence for ‘the religion of the Indus people’ to be a ‘linear progenitor of Hinduism’, has been offered by Gupta to demonstrate that the religion was indeed ‘Vedic-Hindu’ (10). The distinction between Marshall’s hypothesis and Gupta’s terminology may seem trivial at first, as both trace elements of Hindu religious traditions back to this civilization. However, there is a clear ideological divide between the two, which even Gupta has failed to notice while pointing out similarities between his views and those of Marshall. Marshall regarded the seal depicting the ‘prototype of the historic Siva’ (see chapter II.2), the ‘Great Bath’, and the finds of aniconic objects, terracotta figurines of women, and representations of objects of worship and ritual on seals, as ‘the only authentic and contemporary evidence . . . of the religious beliefs of the pre-Aryans’ which he suggested was external to the main tenets of the Indo-Aryan religion. Unlike Gupta, Marshall saw in the Indus religion aspects of the ‘primitive’ religion of India’s indigenous ‘jungle tribes’ and suggested that some of the features were absorbed into Hinduism in later times. Compared with Marshall’s informed guess, Gupta’s terminology of the Vedic-Hindu appears not only vacuous, but is also misleading. His choice, prompted by his thesis that everything about the Indus Valley was indigenous to the Indian subcontinent (10), reveals his unwillingness to recognize a well-documented phenomenon, that Hinduism is an organic religion, which has changed (and is still changing) in its nature and form through time. Gupta’s Vedic-Hindu is simply another projection of the many colonial constructions of ancient India, where the Hindu, and particularly the Brahmanic, religion was identified as a singular faith with a concrete form, perceived as having remained unchanged and static through time, and understood as having dominated the cultural traditions of the majority living in the northern part of the subcontinent before they were invaded by the ‘Mohamedans’.

The continuities in religious practices from the Harappan to the early historical period that are traced by Gupta and those who stay away from his brand of Hindutva history, such as D.P. Agrawal (11), include the entire corpus of the Vedic, Brahmanic and Saivite religious traditions. Are we then to infer, on the basis of the suggested religious roles for the artifacts, that all these traditions were germane within the Harappan religion and have ‘evolved’ from the third millennium BC.?

Lal writes of Harappan women wearing *sindur* (red ochre or vermilion) in their maang (hair partition) (12), finds the Pancatantra stories of ‘the thirsty crow’ and ‘the cunning fox’ in painted pots from Lothal (13), and informs us that people in Kalibangan cooked on clay tandoors (12). He gathers his evidence from regions as distant as Baluchistan and Gujarat to justify his belief that ‘there is no walk of life’ (presumably in India) ‘where we cannot discern the grassroot features of this ancient civilization’ (12). All, however, makes it difficult for us to ‘assess’ his evidence ‘with an open mind’ as he forces his objects, selected from different geographical distances and chronological time scales, to narrate evolutionary sequences of cultures and traditions of the ‘grass roots’ . And yet, it is

his evidence that is being enshrined in *Ancient India* (14), the book currently subscribed for schools in India.

The Challenge: Reacting to the approach originally taken by Marshall, Mackay, and Wheeler, romanticized by the Allchins, and politicized by a whole army of Indian ultra-nationalists, are those who have every reason to see in the iconography of the Mature Indus Civilization many features which have developed from elements first seen in the Early Indus cultures, or even earlier, devoid of any reference to Hinduism, Jainism, and Buddhism. They are, for the lack of a better description, the contrarians and Shereen Ratnagar, Romila Thappar, Ram Sharan Sharma, Dwijendra Narayan Jha, Iran Habib, Rajesh Kochar, and Upender Sigh presently represent this reaction. These scholars de-emphasize the role of gods and goddesses in the lives of the Harappans and do not see any compelling reason to look at the Harappan religion from the perspective of the current or historic Hinduism. Some them, among them Shereen Ratnagar (3), are especially vocal; they have taken exception to the traditional wisdom about the nature of the Indus religion and its relationship to Hinduism. This contrarian viewpoint differs from the conventional explanation in two important aspects. First, the traditionalists try to read too much in the Harappan seals, tablets, figurines, and artifacts instead of admitting to our limited knowledge about the ideology and religion of the Indus people. In place of trying to understand the religious thoughts of the Harappan people from anthropological point of view, and comparing them with other pre-industrial societies of the contemporary Bronze Age, the concept of gods and goddesses has been introduced to the Harappan tradition because we are ourselves the product of this concept.

Second, this contrarian point of view does *not* look at Hinduism as an outgrowth of the Indus Civilization or it being preexisting in the Harappan times. It faces the reality that we cannot make a simple starting assumption that what we today understand as 'Hinduism' was to be found in the Bronze Age. As Ratnagar explains it, Hinduism took centuries to evolve. There was the Vedic stage of sacrifice and elaborate ritual and the importance of the rhythm and sound of the chant, efficacious in itself. There were later inward looking speculative movements that emphasized individual contemplation, mysticism and asceticism, with mutual influences to and from nonBrahmanic systems that were against animal sacrifice and concentration on ritual. The RgVedic deities like Soma and Indra lost their preeminent position too. The focus moved from the village to the forest, from community to solitude. The temple appeared only in the third century AD, in which period began the era of the Puranas with the incorporation of a host of deities, regional cults and sacred places. Then followed *Bhakti* and its rituals and ideology. When the Critical Edition of the *Mahabharata* was prepared earlier in the last century, the project being to sift out or determine the core of the narrative (the earliest sections) from later accretions, passages about Durga or Ganesh were relegated to the appendices, as post-AD 300 interpolations.

It would thus be anachronistic to label Harappan double graves as *sati* burials or to search for caste segregation at Mohenjo-daro or Harappa. The elephant may have had religious significance in Harappan times but that does not mean that there was worship of Ganesh: Ganesh, as we understand him, emerged as a deity around the fourth century AD. Again, the famous Seal 420 from Mohenjo-daro cannot automatically be labeled 'the prototype of Siva as Pasupati'. There may have been continuous strands of religious thought and practice linking the Bronze Age with later centuries, but we cannot suggest that 'Hinduism' is discernible in Harappan pictorial representations. That would be an injustice to the rich history of Hinduism.

In spite of the above remarks, one must note that it is very well possible to find many Indus features that seem to have their counterparts in Vedic mythology and also in later Indian religions. Some of these similarities may be nothing but coincidental and some may seem apparent because we see what we want to see. Nevertheless, it is not beyond any realm of possibilities that some Harappan religious

elements did survive into classical Hinduism. It is also not far-fetched to think that some elements of the Harappan religion(s) are currently manifest in the belief systems of not only Hinduism in India but also the folk religion of Pakistan. Consequently, at the present stage of research it is hazardous to carry any such identifications far while it is equally hazardous to deny any connection of the Harappan religious elements to the modern religions of the region.

T**he Harappan Religious Thought in the Folk Islam of Pakistan:** Within Pakistan, the ancient traditions of the land have been shattered by the advent of Islam in the 10th century A.D. Similar impacts on preexisting traditions of this area occurred several times before through the invasions and mass migrations of peoples from the West and the Northwest. This means that if we want to look for the remnants of the Harappan and the RgVedic religious thoughts and rituals in the greater Indus Valley and the area to its western borderlands, we may not be able to find any reliable base. India, on the other hand, has been largely spared of these overpowering external influences and the discussions on the Harappan heritage are therefore confined to the region beyond the Divide.

In Pakistan the common religious beliefs are probably a reflection of the stratification of different cultural-psychological layers: a composite primitive stratum of shamanic and agricultural magic; possible fresh shamanic Input from Central Asia at about the end of the second millennium BC (not to mention other possible outside influences); an overlay of Vedic ritualism in the middle Vedic period; a general redefinition under the influence of idealist philosophy in the following periods; and most of all the overwhelming impact of Islam. This mixing of elements cannot be limited by a purely chronological scheme; the characteristic of "uneven development," which may be more pronounced in Pakistan than anywhere else in the world, has allowed this interplay of elements from various stages of religious history to continue to renew itself down to modern times. This mixing of elements has been so intricate that it is hard to even guess their origins. Does the 'power of the Word', so commonly practiced in all of Pakistan originates in the mantras of the AtharvaVeda? Is the use of amulets a remnant from the Harappan Civilization or a later import from western Asia? What about the shamanic practices? Are they a recent imports from central Asia or merely a practice that lingers on from the Harappan times? In the folk religion of Pakistan, diverse spirits abound. They are not part of the Islamic beliefs but do these beliefs have their origins in Harappa and Mohenjo-daro or adopted from the belief system of the Vedas? Do the Sufi thoughts, which are at the very foundation of folk religion in modern Pakistan, a heritage of the Upanishad musing on the Brahama (the idea of *Whdat-ulWajood*), Nirvana (the idea of the *Fana and Baqa*), and the endlessness of the spiritual universe (the idea of non-differentiation of *Abad and Aza*l) or purely a later import from Khurasan? The answer to these questions would be hazardous because we simply do not have anything to go on. We do not know anything about the continuity of post-Indus culture in the greater Indus Valley and know even less about the extent of outside nonislamic influences.

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SECTION III
III.1. Indus Script III.2. Deciphering the Indus Script III.3. The Language Issue III.4. The Illiterate Harappans? III.5. The Counterpoint

Section III

The Indus Script



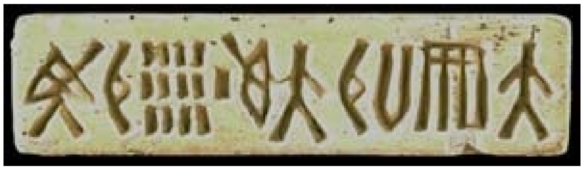
Indus script has been by far the most extensively studied theoretical issue of the Harappan Civilization. The discussion revolves around the nature of

the script and its decipherment. Closely related to the question of script is the language or languages which the Harappan spoke and which these symbols are supposed to encode. A lot has been written on this issue, some in book-length treaties. In recent years doubts have started to be expressed if the Harappan script was indeed a script, i.e. an encoding of speech, or merely nonverbal symbols denoting some auspicious notations like talismans. The debate has been rather sharp edged and in recent years it has reached a stage of polemics. Beyond a few minor points, there is no agreement on anything. In this section we review this material but, obviously, without any conclusion.

We undertake this review under four chapters. We begin with the general description of the Indus script, its history, the media on which it is found written, its character, its form, morphology, and the like. It is followed by the history of its decipherment attempts and the issue of the Harappan language or languages. In the third chapter we attempt to provide a recently introduced hypothesis that the Indus script was not a script at all - at least in the sense of encoded speech - and that these inscribed signs were nonlinguistic symbols serving as talisman. Given the extensive research and repeated attempts of deciphering over the full century of the past, this is, of course a radical thought and cannot be left without a rebuttal. The fourth chapter serves this purpose.

Chapter III.1

Indus Script



Writing, is considered to be one of the major achievements of a civilization as it represents a level of sophistication in which a culture can convey complex concepts by means of symbols through time and space with explicitness and clarity. The Sumerian and Egyptians civilizations clearly represented such a capability. The Harappan Civilization is also believed to belong to those old Bronze Age civilizations which were literate and conducted their important business or administrative functions through some sort of inscribed records and instructions. However, while the script of the Sumerians and the Egyptians have already been deciphered, the Harappan inscriptions have not rendered themselves to be read. A large number of attempts during the past century, some really serious and multifaceted, and some superficial and rather make-belief, have been made but so far no success. Linguistic community seems to be giving up on deciphering efforts in recent years. In fact, opinions are now being expressed which altogether deny that the Indus inscriptions are encoded speech, i.e. a script or a written language. Although it is still not the mainstream posture among the scholar of the Indus Civilization, it is an important theoretical development. We shall examine this issue in two full chapters after the next. Here we shall take the majority opinion, treating the Indus inscriptions as writing. A complex society has large volumes of information to record, process, retain, and transmit. It is difficult to visualize the existence of a civilization such as the Harappan Civilization without some type of writing system.

According to the conventional wisdom, the Harappan script appeared suddenly, almost full blown, *ca.* 2500 BC and it became the hallmark of the Civilization henceforth. Also, the script seems to have disappeared as suddenly with the demise of the Harappan Civilization *ca.* 2000 BC as it appeared. This observation is, however, not unanimous: there are, some recent archaeologists, such as Kenoyer and Meadow, who contend that the appearance of the Indus script was neither that sudden not did it disappear with a bang. In their opinions, both of these processes were gradual, although they prefer not to offer any evidence for such a proposition.

A primary task in the study of the Indus script is the collection of all extant material, making it available in a critical edition, and preparing various kinds of indexes, statistics and concordances. Working tools of this kind have been produced in the last several decades with constant improvement. At present, about 4,000 Indus seals and inscriptions coming from 60 different sites are known, about 2000 of these come from Mohenjodaro, 1500 from Harappa, 240 from Lothal, 140 from Kalibangan, and the rest from Chanhu-daro and other sites. About 1500 of them are repeat and probably 500 can be categorized as not legible, leaving about 2000 different and more-or-less legible inscriptions. Recent discoveries are from Cholistan as surface finds at the large Mature Harappan site of Ganweriwala.

The Harappan inscriptions are mostly on seals and tablets (see Volume III). All these texts are short; their average length is just 5 signs. The longest inscription occurs on a seal with 17 signs in three lines. Some archaeologists, in fact, a majority of them, contend that longer inscriptions were probably written on tree-bark or leaves and these materials have all perished. These scholars of the

Indus Civilization, starting from Sir John Marshall, include cotton textiles among such perishable materials. This hypothesis, although quite attractive, is not based on any archaeological evidence and therefore must be taken only as a possibility, if not merely as a conjecture. These perished documents may or may not exist.

In spite of many claims to the contrary, the writing system of the Indus Civilization remains undeciphered and it is one of the unsolved puzzles.The reasons are many. The Indus inscriptions available to us are very short indeed and so far no bilingual epigraphs are in evidence from anywhere within the region or beyond its geographical borders. Unlike the Rosetta Stone, which unlocked the mystery of the Egyptian hieroglyphs, or the Behistun edict, which opened the flood gate of cuneiform literature in Assyriological researches, the tiny staccato messages of the Indus Valley epigraphs remain mute, inconvertible into human speech, remote, austere and challenging. Another factor is that we do not know anything about the language or languages which these symbols represent. Still, despite the inscrutability of the script, the epigraphists and linguistic experts of the world have made many attempts at its decipherment during the last full century. The account of their efforts would make a long tail of trials and errors, and we shall recount some of them in the next chapter. Here suffice it to say that the net positive gain of their researches so far has been the recognition of nearly 350 to 400 different symbols, and the fact, now nearly confirmed, that the script was written from right to left.

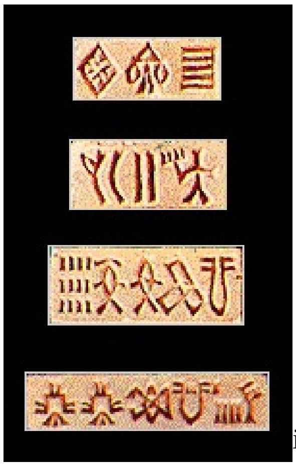
We do not know much
widely in the Harappan world emphasizes their role as signatures. Conversely, the fact that the number of sealings has been much smaller than the seals themselves, indicates their use other than the seal.

Fairservis, before he took a complete Uturn on the subject and embarked on decipherment of the Indus script, hypothesized as early as 1950's that seal writing may not be necessarily writing derived from the oral language. "It has its own meanings and in effect need not have verb, adjective, or adverb. Rather it may be simply a kind of label specifying the individual or his god, house, or belongings, much as a heraldic device

about the socio-cultural lo cus of the Indus Civilization and the place of writing in such an organizational struc ture. There are no accounts, no lengthy tablets, no rock inscription, and no economic records of any kind, so it does not look like a writing system that was deeply em bedded in the common cul ture. Yet, "literacy" of the Indus writing was wide spread. For instance, there are thousands of examples of Indus scriblings scratched

onto the surfaces of ordinary fired pottery. This indicates that ordinary people were probably familiar with at least the elementary part of the writing system and used it in their daily lives.

On the other hand, the lack of long inscriptions and the absence of cursive writ



ing suggests strongly, as **Some Harappan inscriptions on tablets. Note** Fairservis remarks (1) that **the pictorial nature of the inscribed symbols**the writing had limited use.

The fact that the bulk of the writing occurs on seals sug
uses iconographic elements limited in number in countless ways to name the individual or an institution. Except for the numbers, which suggest bookkeeping and thus more mundane motivations, one cannot help but feel that the Harappan script is of this character. It appears to be a script a full step above the potters' marks of pre-Harappan times but below the complexity of early hieroglyphic Egyptian or Sumerian, which was already ideographic", and " . . . though it is writing in one sense, it does not appear to have been much more meaningful to the Indus people than the repeated motifs that appear on their pottery. However, tomorrow's shoveling may reveal a room full of tablets and change this so limited interpretation."(2). Notwithstanding the hope for finding "a room full of tablets", the above thoughts of Fairservis have recently been taken up by a few other

gests that it was simply a seal writing, to be understood by the few. Since we do not know what exactly was the nature of these seals and for what purposes were they employed, we cannot go any further even if we assume that the Indus script was mainly a writing of the seals. In historical times the seals have been used for three purposes: seals used as amulets, those used as representation of the institutional authority, and as the identification of individual, his family, clan, or whatever group or institution he belongs to. There is of course a mystique about a seal; it acts in the absence of the owner as if he were present. Thus, a sealed package stamped with the owner's name is not opened by those for whom it is not intended. The fact that seals have been found scholars who are casting serious doubts on the assumption that the Indus inscriptions in fact represent the encoded Harappan speech.

The discussions about ancient scripts and languages are involved, and they are by its very nature multifaceted. This is especially so about the Indus script and the language (s) it may codify. The difficulties that a lack of decipherment presents is obvious. All speculations are, therefore, based on the comparative studies of other ancient scripts in the West with which the Indus peoples were quite familiar during and prior to the Harappan period. They also take into account the post-Harappan evidence, especially the spread of various languages in ancient Pakistan as well as eastern Iran and Afghanistan.

“Origin” of Writing and the Development of the Indus Script: The earliest writing likely developed gradually with its beginnings as early as twenty thousand years ago in the form of early cave drawings, called petroglyphs. Later drawings clearly became pictograms, or picture writings that were a direct image of the object represented. Such early forms of writing were relatively unrelated to the language spoken because they simply represented physical objects rather than the sounds used linguistically to identify the objects. Later the meanings of many pictograms were extended to represent concepts related to objects such as a picture of the sun to represent heat, or daytime, etc. Such pictures are called ideograms since they represent an idea rather than an object alone. Later as the pictures progressed, they became simplified and stylized to the point where they would only be understood by those educated in the system. As the evolution of writing progressed, the pictograms and ideograms became symbols that represented the linguistic sounds that represented the ideas, and objects and the words of the language.

The history of writing and the evolution of several alphabetic and non-alphabetic scripts are discussed in Daniels and Bright and references therein (3). Two recent books under the same title, *History of Writing*, are by Anne-Marie Christin (26) and Steven R. Fischer (27); both give a broad view of the development of the art of writing. Damerow (4) has examined issues related to monogenesis and polygenesis of writing and presents arguments on both sides without committing to a specific point of view. There are several other sources which deal with the origins of writing, some of them listed in the Bibliography of this volume. In all these descriptions, West Asia has been identified as the region where writing fist appeared.

The first signs of recording in West Asia go back deep in history. They consist of small baked clay objects, shaped like spheres, half-spheres, cones, tetrahedrons and the like, found on sites dating back as far aback as the ninth millennium BC. and virtually coincide with the first appearance of agriculture in the region. They are the earliest device for recording the number and species of animals possessed by a temple and they were used over the many thousands of years which separate their first appearance from that of the oldest clay tablets at Uruk in southern Mesopotamia that may be properly called 'writing'. These earliest 'writings' still used the same symbols, now incised in stone or clay, as represented by earlier clay tokens. At the end of the fourth millennium B.C. a more complex type appears, signaling the appearance of an increasing number of more specialist manufactured goods, the hallmarks of an urban economy. The token systems then evolved into two of the greatest human inventions: abstract numerals and phonetic writing. A similar picture emerges in the Greater Indus Valley, where some notations begin appearing on pottery as “potters’ marks” in the pre-urban cultures of the region in the fourth millennium BC.

Indus Writing an Import or an Indigenous Development? The ‘origin’ of Indus script has been a controversial topic for some time, although a consensus seems to be developing in recent years. Two questions were being asked: Was Indus script ‘imported’ from outside the Indus region or was it

strictly an indigenous development, and b), if the script originated locally, then what is the course of its development. Closely related to these questions is the chronology of its development and how does it correlate with the development of the art of writing in other contemporary civilizations.

In the nineteenth century, scholars generally held that writing was invented only once, in Mesopotamia, and all subsequent writing systems were offshoots of this original. They claimed that Chinese and Indus writings evolved from Middle Eastern prototypes, and they treated Maya not as a writing system but as a purely calendrical and mnemonic system. The biggest problem with the monogenesis of writing system and its subsequence diffusion is obviously that of culturally tinted views. It easily places Europe at the pinnacle of civilization, relegating the rest of the world to the "primitive" and "unevolved". This theory, however, started to break down when the evidence for the indigenous origin of Chinese became very strong with the discovery of the oracle bones and the lack of any earlier text in the vast space between the Iranian plateau and the Yellow River. Another blow was the decipherment of Maya hieroglyphs which revealed a writing system just as sophisticated as anyone found in the Old World. The stage was thus set for a modern view of how writing came about. Nowadays there is consensus that writing was invented independently in at least three places: Mesopotamia, China, and Mesoamerica. Recent discoveries are providing evidence that writing was invented in Egypt and Indus independently of Mesopotamia also, although their connection with Mesopotamia cannot altogether be discounted.

Walter Fairservis (1) proposed that the Indus characters were derived from the general stock of Neolithic culture in Western Asia, drawing on proto-Elamite. In 1974, Kinnier Wilson (5) agreed with this assessment and suggested the link between the Indus script and that of Sumer. Wilson based his argument on the basis of the ostensibly common language rather than on the heritage of a common script symbols from the Neolithic times. The crux of his arguments lied in the assumption that the Harappans and Sumerians were originally one, but that, at some unknown period in pre- or protohistory, the one family separated into two branches, or rather, that a small branch, the Sumerians, left the parent stock, the Indus people, to settle in new territory, southern Mesopotamia.

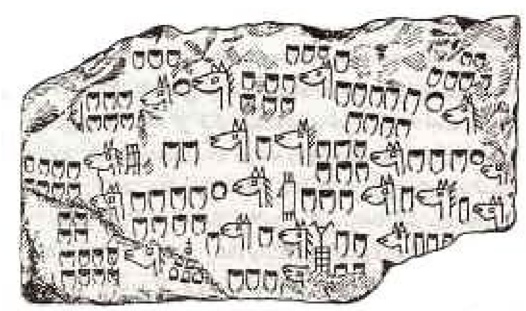
Later archaeological researches in eastern Iran, southern Turkmenistan and Afghanistan provided additional fuel to this debate. The excavations at Tepe Yahya and Shahr-i-Sokhta shed much light on cultural interactions on the Iranian plateau and the dominant role played in them by the enormously extensive Proto-Elamite culture (conventionally dated to 3200-2900 BC). It is not inconceivable that this cultural influence extended as far east as Baluchistan and Sindh. The Elamites used a written accounting system with complex numerical notation and a script. It has not been deciphered, but the numbers and a few of the signs can be read, and there is considerable understanding of the structure of this script.

It is likely that the inhabitants of the Indus region were aware of the Proto-Elamite script and its uses; this knowledge may have encouraged them to develop their own script when the circumstances arose, i.e. that made writing useful to them, even though they put it to different uses. Although the Harappans developed completely different signs to those of Proto-Elamite, they may have drawn on the latter as a general model, borrowing some of its features. This is suggested by the fact that, of all the possible combinations of direction of writing and the use of space on their written media, the Harappans chose the same one as the Elamites: in lines from right to left and from top to bottom. (For comparison, at much the same time, the Sumerians were writing in boxes arranged in columns). The result of this influence was probably to kick-start the development of the Harappan script, which grew into a

complete writing system during the Transition period of the Harappan Civilization. In contrast, the Proto-Elamite script disappeared.

The theory of Sumerian or Elamite origin of the Indus script has lost its force and archaeological evidence is increasingly pointing to the general conclusion that Indus script is deeply imbedded in the Harappan culture. Few scholars in South Asian archaeology would now wish to maintain that the Indus Valley Civilization should be treated as an alien culture which penetrated the Greater Indus Valley around 3200-3000 BC. Although a clear route of the indigenous origin is not yet discernible except for a general agreement among scholars to date the beginning of the Indus script in the same general area where agrarian societies developed in the preceding times, on many accounts the indigenous development is a much more attractive explanation for the genesis of the Indus script than its 'foreign' origins.

Archaeological evidence points to the general conclusion that Indus script is deeply imbedded in the Harappan culture whose roots go deep in ancient history. At the time when Indus script appears on the scene, the area was inhabited by people of the flourishing Kot Diji Culture and other related cultural assemblages, collectively called the Early Indus cultures. These regional cultures, would appear to have formed the foundation for the Indus Civilization (6). Jarrige places these regional cultures in a wider context in which the societies of Baluchistan and of the Kachi Plain and Kohistan in Sind play an important part. In the Kachi Plain an unbroken sequence has been established from the Early Neolithic right up to the Mature Harappan Culture (Nausharo II and III). This strand of continuity is very relevant to one of the puzzling features of the Indus Valley Civilization: the apparent absence of any clearly definable religious system and especially of the temple complexes which characterized contemporary civilizations, which was a characteristic of the Sumerian culture of the time. The argument goes that if these and other cultural traits did not diffuse to the Indus Valley from Sumer, there is practically no chance that the art of writing could have done



A sample of proto-Elamite script

either.

Antecedents of the Indus Writing Symbols: If we discount the origin of Indus script in the West and at the same time take cognizance of its introduction in the Early Indus cultures, we are left with a group of symbols called 'potters' marks' for the earliest period of the script's development. These 'potters' marks' are incised on the exterior, i.e. on and below the neck, as well as near or on the bases of pottery vessels. Their geographical distribution ranges from Southern Turkmenia, North-West Pakistan, Seistan, the Kandahar region of Afghanistan, and Baluchistan up to the Indus Plains (7). The earliest findings of these 'potters' marks' come from the site of Rahman Dheri in the Dera Ismail Khan district of NorthWest Pakistan, and have a C-14 date of 4400-110 B.C. (8,9). Rahman Dheri has further provided ample evidence how they became more frequent in the intermediate and upper phases of the site, in some cases even appearing in groups.

Principal Early Harappan sites that have yielded pot-marks are detailed by Asko Parpola (10). In Baluchistan, Mehrgarh IV-VII (3500-2500 BC) has a total of about 850 marks; Damb Sadaat BC) has a total of about 850 marks; Damb Sadaat 2600 BC) have yielded 362. From Periano Ghundai in the Zhob Valley come comparable surface finds. Such marks occur also in southern Afghanistan, Mundigak I, dating from the first half of the 3rd millennium, and at Balakot in the Las Bela region of southern Baluchistan, probably a seaport in Harappan times. Incised potter's marks have been found at Amri dating *ca*. 3500-2700; a few are known from nearby Kot Diji. The excavations at Rehman Dheri in the western plains of the northern Indus Valley (3300-2500 BC) yielded a large number of incised potter's marks, so did Sarai Khola II near Taxila. A few potmarks are known also from Early Harappan Jalilpur II in the Punjab and Kenoyer and Meadow reported quite a few potters marks from Kot Diji occupation (2600-2800 BC) at Harappa (11).

The wide distribution of these 'potters' marks' and the constant increase in the use of signs throughout the third millennium B.C. has led some scholars to consider them as the forerunners of the Harappa script. A number of these scholars have studied the similarities and differences between such marks present within the Early Harappan and signs within the later Indus script, and have suggested that there may have been some degree of continuity (28,29). Durrani gives examples in which he postulates a link between the 'potters' marks' and later Harappan script. Unfortunately, his comparisons are inaccurate and do not provide a solid foundation for supporting the hypothesis that these marks were indeed a formative stage of the Indus script.

Parpola suggests such continuity is unclear stating: "nowhere do we find clear evidence of a gradual progress toward real writing in the Early Harappan period" (18), a view also shared by Possehl (30). Some other scholars have also discounted such a connection and few archaeologists now claim that the Indus script directly originated from the potters' marks of Balakot or Rehman Dheri although some potters' marks may have superficial resemblance with a few signs of the Indus writing system. Dani, for instance, emphasizes that the invention of a writing system is very different from the use of abstract symbols in rituals or for identification, and that the former has no relation with the latter. He showed that there was little connection between the shape of the Harappan writing symbols with that of the potter's marks at Rehman Dheri, Balakot, Harappa, or elsewhere, nor were these potters' marks a precursor of writing. He pointed out that the use of abstract symbols is common to all cultures, and signs similar to those used in the Indus Valley are found on pottery and other goods throughout the world, from Egypt to China, without direct cultural connection. Later discoveries at Harappa give credence to this position as one sees no clear correspondence between the potters' marks from Rehman Dheri and the 'script' of the Early Indus period at Harappa. There is also no correspondence between the inscribed marks of the Early Harappan period at Harappa and the writing symbols of the Mature period. Since the potter's marks continued to be used even after the formalization of the script, it is suggested that their function was different and, to some extent, independent of writing itself. The potter's marks were probably used for magical protection or simply to identify the owner of a vessel, rather than representing writing. Scratched lines or other graffiti continued to be used throughout the Mature Harappan period and into later times. Some of these symbols are simplified pictures of plants, animals or mountains; others are abstract geometric shapes, lines, circles and triangles.

I actually think that the Indus script was probably a protohistoric script, somehow conveying the sounds and words of one or more still unidentified languages. Although proofs are lacking, this is the most reasonable assumption; and I must

confess that I have lived so far rather content with such uncertainty.

Massimo Vidale, Collapse Melts Down, Doctors.com 2007

Quivron studied a corpus of 1265 marks from vessels recovered from excavations at Mehrgarh and Nausharo which provide a sequence from 3600 to 2500 BC (31). All the marks were made before firing, presumably when the vessel was drying, and most were made on the underside of the base. The key corpus is provided by a failed open kiln, dating to Mehrgarh period VI (*ca.* 2700 BC), which contained a large number of abandoned vessels, many of which were inscribed with different signs (31). A further large collection of vessels, one hundred, was recovered from storage room CXVIII belonging to Mehrgarh period VII, of which 33 were incised with a total of 16 different signs. Quivron assumed that as there was no apparent link between sign and vessel type within room CXVIII, the purpose of the inscribed signs was during the manufacturing cycl. Fmthermore he noted that the frequencies of such signs increases and peaks at *ca.* 2700 BC and then decreases, and these marks are then mainly post-firing graffito, and makes the comment that this may be indicative of the increasing centralization of ceramic production during the mature Harapp.an period. In an end note Quivron also suggests that the 'marks were perhaps' used to



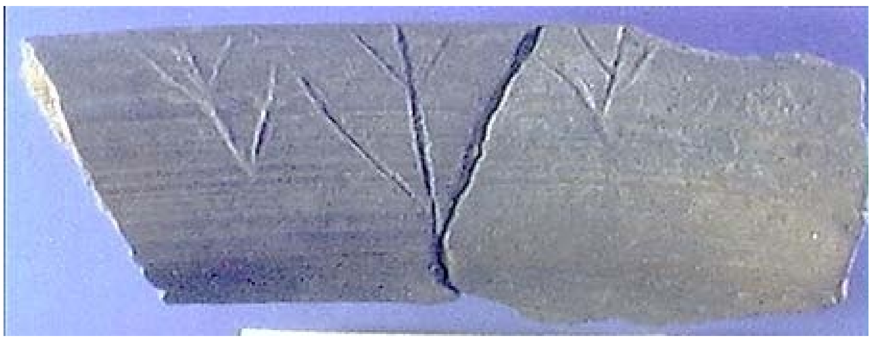
Potters' marks on a Early Indus pottery.



Potters' marks or the beginning of the Indus script?



Script incised prior to firing on the exterior of a terracotta mold from Naushahro used to make large globular jars (*after Kenoyer)*



Early Indus graffiti or potters' marks



Red slipped pedestal with potter's marks from Kulli culture (Bakar Buthi, Baluchistan)

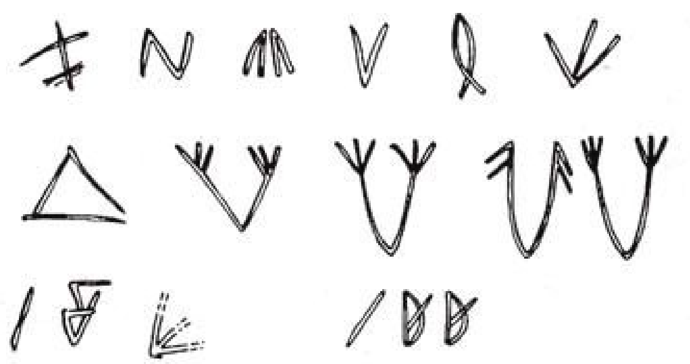
 **An early sample of the Indus writing, from Harappa (after Kenoyer)**



Many large storage jars of the Harappa Phase (2600-1900 BC) have writing inscribed along the upper portion of the vessel. This inscription includes a figure of a man with the

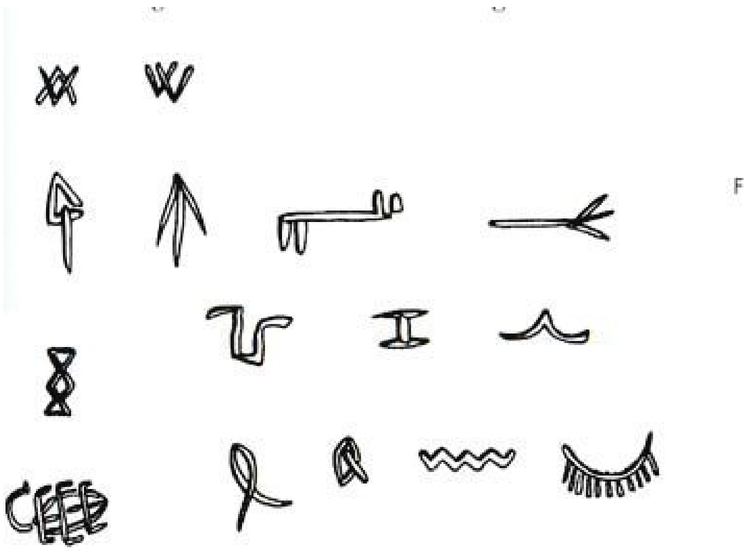
bow and arrow sign in each hand.

avoid confusion of ownership during firing in cases where the vessels were fired in communal kilns' (31); this surely is the key point of this study. Clearly, it would make greater economic sense for individual potters to spread the risk of a failed firing by sharing a firing with others; in doing so they needed a form of identification to differentiate their own goods from that of the other share holders



Early potters' marks from Rehman Dheri, c. 3500-2600 BC (Durrani)

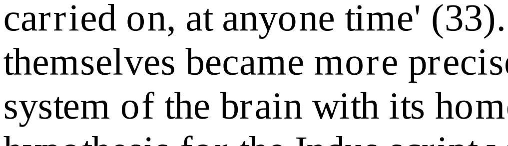
(32). Although clearly such developments are not in writing, as in the case for graffito-inscribed ceramics from late Iron Age contexts, they represent a demand for recording, as Goody states: 'In some non-literate societies rights are indicated by graphic marks of ownership on pots and livestock, giving rise, some suggest, to semiotic codes of limited scope. Certainly they are embryonic forms of writing often associated with specific claims to property' (33).



Early Indus "script" from Harappa, c. 3300- 2600 BC (Kenoyer)

Whilst such graphic marks are an important step towards literacy, even Quivron states that 'there is no evidence in the pre-Indus material so far available of a gradual progress towards real writing' (31). Goody concurs that such recording systems are not in writing and that writing itself allows a number of barriers to greater socio- economic integration to be overcome (33). Goody argues that non-literate societies can expand only to a certain size, after which fission occurs as the links between centre and periphery become too great, however, he states that: "The presence of a literate bureaucracy ... mitigates against those fissiparous tendencies, providing a consolidating factor in state building-not only because of the fact and content of communi- cation ... but also because the use of a common written language or a common logographic script helps to overcome the diversity of spoken tongues and dialects. (33).

Goody's model is clearly applicable to the processes of socio-political integration which culminated in the creation of the Harappan world. Writing also contains a number of key elements such as exactness and legitimacy and that, as well as proving a means of communication between centre and periphery, it also is a method of distancing oneself from direct contact. Whilst enabling the alienation of property and the organization of the means of production and the organization of production it also expands 'the capacity of the memory store ... so that more transactions could be kept track of, and hence



Potter's marks from Damb Saadat (Pre-Urban) period

carried on, at anyone time' (33). He also highlights the fact that 'reciprocities and obligations themselves became more precise when they were set down in writing than being held in the storage system of the brain with its homeostatic tendencies' (33). If we are to recover similar information and hypothesis for the Indus script we have to return the context of the material itself, and indeed to acknowledge what is missing from the archaeological context.

These 'potter marks' may have been trademarks, or signs of personal prosperity, or they may have indicated place or person of manufacture. Perhaps they even have had an amuletic value (2). The

marks may also have constituted a purely functional device for assigning a particular pot or group of vessels to their place inside the pottery kiln, thereby acting as a sure identification of the owner of that particular pottery. A recent discovery of seal impressions, inscribed stoneware and terracotta bangles at Moenjo-daro may lend further support to this suggestion. The items

concerned were apparently used to prevent unauthorized interruption of the firing process (12).

Finally these 'potters' marks' may represent a system of mutually intelligible symbols commonly shared and accepted in the prewriting stage of the agricultural economies and early urban centers that emerged in Baluchstan during the fourth and third millennia. It should be emphasized that 'potters' marks' as a means of communication or a device for kiln production do not play a role in the fully urbanized "High Culture" of the Indus Valley. This is invalidating the theory that they have been instrumental in the emergence of the Indus script (12).



A stone tablet with a few incised “potters’ marks”. The tablet belongs to the Early Indus period (most likely to the Kot Diji culture, c. 2600-2800 BC) and

was discovered by Kenoyer and his team at Harappa. It re- ceived a wide publicity as an example of the early Harappan writing.

This survey shows that potter’s mark existed over a vast area in the Greater Indus Valley many centuries if not a millennium before the formalization of the Indus script. The post-Neolithic societies on the threshold of urbanization had created communication methods that served their still relatively modest needs. It is therefore not farfetched to conclude that the potters’s marks of the Early Harappan could have been important forerunners of real writing: the conditions for the need of writing no doubt existed and these local symbols could be adopted as signs of the Indus writing which was still to come. This internal dynamics could in all likelihood combined with stimulus coming from the west. According to some archaeologists, therefore, an indigenous origin of the Indus script is very well possible.

In spite of this strong and justifiable skepticism, Kenoyer and Meadow seem to freely relate the potter’s marks-like signs to the ‘early’ stage of the Indus script (13).They explicitly connect the inscriptions on the potsherds recovered from the pre-urban occupation of Harappa to the development of the later Harappan script. An inscribed stone belonging to the Early Harappan period of Harappa were given a widespread publicity as an example of an early Indus writing. A few potsherds with potter’s marks type inscriptions, some done before firing and some after, were also made available by the excavators as examples of early Indus writing.

Kenoyer (14) has studied the evolution of signs from early to mature Harappan period by a careful

examination of the stratigraphy and quality of engraved material excavated from Harappa. The study has shown that the writing becomes more standardized and uniform as the culture evolves into its Mature period (2600-1900 BC). It also shows that a fraction of the pottery markings found in early period seem to have evolved into signs of Indus script. Although some archaeologists would not agree, the study shows that the script goes from simple pottery markings during the Ravi phase (3900-2800 BC) through Kot Diji phase (3900-2600 BC) and becomes standardized in the mature phase (2600-1900 BC). B.B. Lal, an Indian archaeologist, also sees a correspondence between the signs used in the Indus writing system and the potters' marks from the Early Harappan phase of various sites.


An inscribed Indus sherd

The origin of the Indus script in the potter's marks of the Early Harappan cultures is interesting, but it falls short of being compelling. There is not yet a convincing bridge, not even at Harappa, that allows us to see a progression from the use of single signs to sign combinations, sign standardization, and the development of a system of representation that has an institutional rather than an individual quality. The internal relation between the various pre-urban symbols does not warrant the conclusion that these were somehow the precursors of the Mature Harappan. By the same token, the Indus script and Proto-Elamite are not sufficiently complex and extensive to warrant a conclusion of genetic relationship between the two. Perhaps the question can be definitely solved when clear examples of the early formative stage of the Indus script become available. On theoretical ground and on the basis of the archaeological evidence, the Indus script seems to have emerged as a fully formed system of abstract signs with the drawing of the Indus Civilization. If the Indus script evolved indigenously, it is reasonable to assume that the script arose from the same set of general culture processes that brought urbanization to the plains of the Indus Valley, the use of potters' marks was definitely an element of these cultural processes. This is, at least, the way the argument goes.

Making of the Indus Symbols: The work undertaken by various scholars, among whom the most prominent is Parpola (18), in compiling sign lists has established that there was a corpus of basic signs, numbering around one hundred and fifty to two hundred, and an equal or greater number of other signs, many of which are compounds of the basic signs, making the total number of the Indus script signs around 450. More recently, Wells (19) has attempted to classify the signs into several categories such as simple signs, signs with elaboration, compound signs, enclosures, strokes, etc. However, the most comprehensive study in the design of the Indus signs so far is that of Yadav and Vahia (20) who undertook the analysis of the structural design of the Indus signs and the interaction between their components. According to this study, the number of basic designs, 417 in total, is consistent with Parpola but far higher than the reduction to 20 basic signs proposed by Rao (21).

As we look at these signs, three characteristics come to our notice. First, it is evident that the Indus signs have been carefully designed, keeping the symmetry and aesthetic in mind. Second, when two

basic signs are merged into one self-standing sign, the symmetry and aesthetics are still maintained. Third, the sign, whether basic or combined, is consistently reproduced exactly in the same fashion, no matter where, when, and who carved these signs on the seal. All this makes it clear that like all other writing systems, Indus writing was an intellectual exercise of great significance and a lot of thought, planning and utility issues have been taken into consideration while designing these signs.

“The Indus signs were designed with care and combining signs with other signs or modifiers seems to have been a practice known to all sites. Indus people seem to employ several interesting techniques such as using a set of modifiers to modify the basic sign and sign compounding. We also find instances of doubling and mirroring in the design of Indus signs. The usage of a similar set of constituent basic signs in different configuration in compound signs seem to convey different information. The designers of the Indus signs also placed a especial emphasis on symmetry and there seems to be an underlying effort to retain the overall aesthetic value of Indus sign” (20).

The Indus civilization was spread over an area of about a million square kilometers and yet, the sign list over the entire civilization seems to be the same indicating that the signs, their meaning and their usage were agreed upon by people with large physical separation. This arrangement worked satisfactorily for about 700 years. Hence the understanding of Indus signs and their meaning must have been robust and yet versatile and easy to use. This is also reaffirmed by the fact that Indus script has been found on seals discovered in West Asia with a different grammar. The usage of modifiers at almost all sites suggests that the manner of sign modification was universally agreed over the entire area of the Indus valley civilization and was not intended for a small group of people (20). It seems that from origin to matured stage the script took not more than 200 years. In strong contrast, the development of script in Mesopotamia took much longer and continued much later than the withering away of the Mesopotamian civilization. Perhaps no script developed from beginning to mature stage anywhere in the world within such a short time of 100 or 200 years' span as well as vanished from the arena as soon as certain system of economy and urban material culture collapsed. Paraphrasing Possehl, the writing in Mesopotamia, where Cuneiform writing begins in the sixth millennium BC with three dimensional counters or tokens, slowly developed into the primitive texts of the late fourth millennium BC, whereas the development of Indus signs can be traced within the 100 to 200 years of transitional phase of Early to Mature Harappan Civilization. Over and above this, excepting one or two cases, no change of design of the sign was detected for about 600 years of continuation of the matured Harappan Civilization. There are few, if any, examples of such a static script anywhere in the world; scripts do change with time as the cultural needs change. This is another theoretical dilemma of the Indus script to which very little attention has so far been given.

In 1931 Langdon suggested a date of 2800 BC. for the origin of Indus Valley script on the basis of the then known inscriptions and script signs from the Indus Valley. In his research he incorporated their limited occurrence on cylinder seals, Indus Valley stamp seals and seal impressions known at that time from Elam and Sumer. A bone cylinder seal from Susa showing a file of short-horned Indus bulls accompanied by an Indus inscription was dated at *ca.* 2800 BC. and consequently Langdon chose the same date for the Indus Valley script. Comparing it to the Egyptian pictographic system, Langdon remarked that the Indian script was, despite its widespread geographical distribution, already standardized and offered no scope for studying an evolutionary process. He expresses his astonishment at the sophistication of the script itself and at the apparent knowledge of phonetic principles in such an early period.” From the fact that the Indus script was already standardized and that a large number of the original pictographs had been reduced to neat forms, Landon draw the

conclusion that it evolved over a long period of time (15).

In a postscript Langdon expressed his view on a possible relationship between the earliest stage of the Sumerian script and that of the Indus Valley. Recently this relationship has been reconsidered by Kinnier Wilson (5). In the light of new evidence we now know that the oldest texts recovered from Sumer come from Uruk, not from Jamdat Nasr. Within this corpus of the Archaic Texts from Uruk two chronologically distinct groups of tablets can be recognized. Nissan (16) attributes these to the last phase of the Late Uruk period, viz. Uruk IV-III, and the Jamdar Nasr period respectively, dated to *ca.* 3200-2900 B.C.

In 1982 K. Koskenniemi and A. Parpola suggested an approximate date of *ca.* 26th century BC. for the creation of the Indus writing system, basing their hypothesis on parallels with the Sumerian writing system of the Fara texts in the 26th century BC. During Caspers (12) prefers to date the earliest known Indus inscriptions to the late fourth millennium B.C. but consider it unrealistic to maintain that the Indus script, having been used over such an enormous area as that covered by the Indus Culture, remained totally unchanged and entirely static during the many centuries of its existence, i.e. from the late fourth millennium BC. to the early centuries of the second millennium BC. Nor can we rule out the development of local 'dialects' within the various widely separated centres of this civilization, which may be reflected by some groups of the large corpus of Indus texts so far known to us. Furthermore we must also examine what form of written system, if any, existed in the pre- or proto-Harappan societies of South Asia.

Lack of Successors *:* The inscribed symbols spread almost in the entire area of the Indus Civilization and the scribes continued to produce these till 1950 BC, after which the art disappeared, rather abruptly. When urban life declined in the early centuries of the second millennium, the script went out of use. A few Harappan signs occurred among the graffiti of the post-Urban period, but these were rare and, when several were used, their order was random. Some signs resembling those of the Indus script continued to appear occasionally in later contexts; it is probable that these signs, while no longer encrypting speech, held a symbolic meaning for those who drew them, for example as auspicious or religious symbols or royal insignia.

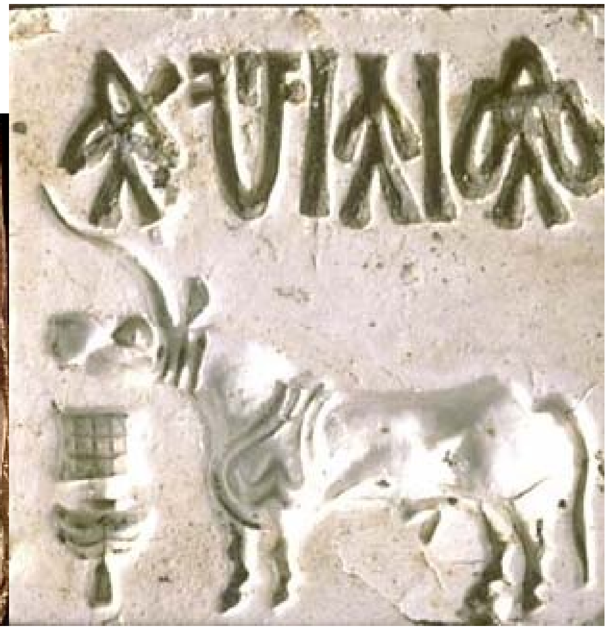
Nothing links the Indus script with the Brahmi script that came into use more than a thousand years later. Brahmi derives from a north Semitic script first used somewhere in West Asia, one of the descendants of the consonantal alphabet invented in the Levant during the second millennium BC. Another script, Kharoshti, which became dominant in the upper Indus Valley of Pakistan and along the Silk Road and which played a dominant in the Gandhara Civilization of Pakistan, had a similar ancestry. The letters of the parent alphabet were adapted to form the basic consonantal signs of Khroshti as well as Brahmi; to these, diacritics were added to mark the combination with the different vowels (17). The direction of writing was from right to left in Khroshti but left to right, in contrast, in Brahim. In the early first millennium BC, a modified version of Brahmi was created in south India to write Tamil, while Khroshti script remained popular in Pakistan and some areas of Central Asia. This summary has, however, to be tampered by the recent discovery of the ‘Kabul Manuscript” to be described subsequently.

Written Media: Most examples of Indus writing come from the excavations at Mohenjodaro and Harappa, but some 60 different sites throughout the Indus Valley have also contributed one or more objects with script. Approximately 60 percent of the Indus texts are carved on stamp seals and

inscribed tablets made of steatite; the rest are on diverse media, such as terracotta, copper objects, faience, etc. If the Harappan used cotton, silk, or woolen fabrics, leather etc. as written medium, they have perished long time ago and do not appear in our archaeological record.

Most surviving Harappan inscribed materials are square stamp seals that bear an image and a short text. These are usually of steatite, though a few are made in other stones; two from





Most of the Indus writing is on steatite seals. The written symbols are generally accompanied with the picture of a bull, unicorn, and other animals

Mohenjo-daro are of silver, presumably deluxe versions. The majority of images are of animals, especially the unicorn, but also bulls, elephants, and a number of other, mostly wild, animals; a few show scenes or composite animals. A line of script usually appear along the top of the seal. No link has been found between the images and the inscriptions on the seals. The seal texts are generally short, averaging four to five signs, and use a large repertoire of signs. The inscription was



An impression of a molded Indus seal with inscription



Another sample of Indus writing on a molded terracotta tablet



A clay impression of an Indus writing

written in reverse so that it could be read correctly when impressed on sealings or elsewhere, for example occasionally on pottery. Clay sealings, of which relatively few have survived, might bear the impression of more than one seal or the same one several times. A small number of larger seals are known, all of an unusually high standard of workmanship. Other types of seals occur in small numbers. These include a cylinder seal from Kalibangan and a few seals with inscriptions on both faces and no boss.

From the upper levels at Harappa come many miniature tablets. These bear a short inscription on one face,

written to be read directly from the tablet, and often a number on the other, sometimes accompanied by one or two other signs.These tiny tablets are erroneously called miniature seals for, besides being very thin and small, they are characterized by the absence of any knob or hole to handle them. This factor, in conjunction with the very superficial nature of the writing on them, shows they were unsuited for stamping seals. Vats already noted that these tablets were meant to be read directly from their originals and not from their impressions. The range of the inscriptions is very limited and the signs are few in number, because of the limited surface space and the frequent recurrence in the same order of the same signs. While many of the tablets are rectangular in form, others were made in circular, half circle, or fan

**An inscribed Indus symbol (left) and its impression (right)**
Harappa, although a few Central Asian type of cylinder sealare reported from other sites.

Unlike seals, almost all of which are unique, an important aspect of tablets is that, at Harappa (as well as at Mohenjo-daro), there are numerous instances of (a) incised steatite tablets with copies of the same signs and/or motifs and (b) duplicate bas-relief tablets of faience or terracotta made from the same mold (22). Copies of incised tablets and duplicates of molded tablets have been found in large numbers in two noteworthy instances at Harappa: (a) script copies incised into 22 rectangular steatite tablets, triangular in section, from secondary deposits of Period 3B on the outside of the perimeter wall in Trench lI on the East side of Mound E and (b) 31 duplicates bearing iconography and script, made of rectangular molded terracotta, biconvex in section, from the northern portion of Trench II in Area G. Other copies and duplicates have been found scattered across the site where, like the multiples above, they are always found in trash, fill, or

street deposits.

Why tablets were made, how they were used, and why they were discarded remain intriguing unanswered questions. Their intrinsic interest lies not only in the script that they often bear, but even more so in the iconography, which provides an important glimpse, however fragmentary, into details of Harappan ideology, particularly for the time frame from *ca.* 2400 to *ca.* 2000 BC (Harappa Period 3B through much of Period 3C). These items may have served as

shapes and even in the form of trees, fish, hares, or other animals. Most tablets are flat in crosssection, but others are triangular, deeply rectangular to square, plano-convex, bi-convex, or almost cylindrical. This last form has led to much confusion in the literature as they are often incorrectly referred to as cylinder seals. So far, no true cylinder seals have been recovered from votive offerings or perhaps as tokens of exchange used in commercial transactions (19). The system of symbols may also have been employed in a protective or otherwise magical manner, as suggested by the presence of the script on everyday objects, such as stone bangles, beads or tools (23). These last objects are among the less frequently found inscribed artifacts, unlike ceramic vessels, which carry symbols more often.



A stone mold to cast terracotta seals or tablets from Harappa



Some examples of Indus tablets with inscriptions on three sides, from Harappa (Kenoyer)

At Mohenjo-daro, but at no other site, more than one hundred small engraved copper tablets have been found. These bear an inscription on one face and a design on the other. Generally a particular design is paired with a particular inscription, and the repertoire of inscriptions and pictures is quite restricted. Sometimes the image is replaced by another short inscription. The designs include composite animals, the endless knot motif, and a wild man with the hindquarters of a bull, armed with a bow and wearing a horned headdress - possibly a shaman or deity. These may have been amulets. A few quite different cast copper tablets with a raised design were found at both Harappa and Mohenjodaro.

Inscriptions were engraved or stamped on a number of other objects. These included ivory and bone rods that may have had some ritual significance and the stoneware bangles that may have been worn in a political or religious context. There are inscriptions on about two dozens of the some inscriptions, so do a few metallic tools or weapons.

Bronze axes and chisels, gold jewelry from Mohenjo-daro, bone hairpins, and painted terracotta bangles, are other objects on which the Indus script appears. While in some cases these inscriptions may have denoted ownership, in most cases they are more likely to have been prophylactic charms for ensuring the object's safe use or to protect the owner. Some objects, judged on their quality, seem more likely to have been votive



Two steatite seals from Harappa, with similar unicorn motif but



Inscribed tokens, made in molds

short bone or ivory sticks decorated with geometrical motifs. Their function is unknown, but the occurrence of concentric circles in different numbers on various sides suggests that they may have been used as dice or as mantic sticks in divination. A few dozens of bangles also carry

different inscriptions.

than functional; on these the inscription may name the person or group dedicating the object or the deity to which it was being offered.

One of the least studied but potentially most informative contexts for writing is on pottery. Inscriptions were impressed on many pots before firing or scratched on afterward, perhaps giving information on the designated contents, the capacity of the vessel, or its ownership. Large storage jars

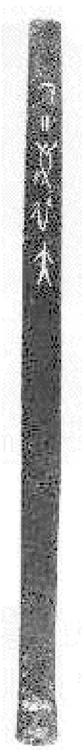
had an inscription in relief formed by incising the inscription into the mold used to shape their base section Signs were molded on the base of a vessel or incised in the soft clay prior to firing. Such inscriptions were made by the potter or by a literate person who came to the workshop specifically to write on the unfired pottery. Seal impressions on pointed-base goblets were probably made by the potter, as these impressions were often made while the vessel was still on the wheel and the clay wet. Inscriptions made after firing, referred to as graffiti, could have been scratched on the vessel at any time. Large black-slipped storage jars invariably have bold graffiti on the curving shoulder of the vessel, often written at an angle as if the writer did not care how it looked. The inscriptions probably represent the owner's name, the vessel contents, or the destination. Inscriptions or graffiti scratched onto a vessel in use reflect the practical application of writing in the course of active transactions. The traders and consumers of these specific goods must have been able to read and write, or at least recognize specific symbols. An alternative explanation is, of course, that these ‘written’ symbols were nothing more than ‘talismans’ to protect the vessel from unforeseen breakage or give supernatural protection to the user of the pot.


Inscribed bronze axe from Mohenjo-daro

More common than seal impressions on tags are imprints with script on ceramic vessels that were stamped before firing. These are found almost exclusively on those Harappa Period 3C vessels called "pointed base goblets". To judge from the quantities of sherds recovered at Harappa, such vessels were mass-produced in the tens if not hundreds of thousands. A very small percentage of these vessel fragments recovered by HARP bear impressed stamps with one or more signs. The seals used to make these imprints are of the long rectangular form found only in Period 3C, dust as the pointed goblets are also found only in that chronological period (*ca.* 2200-1900 BC). These provide strong evidence for the distribution of ceramics between Harappa and smaller settlements in its hinterland. Pots were not only stamped with seals, they were also incised with Indus symbols and, on rare occasions, signs were even painted on pottery (19).

In addition to the commercial or economic applications of writing, this new invention is also attested on personal objects and ornaments used exclusively by wealthy and powerful individuals. Copper tools, gold ornaments and even tiny bone pins were inscribed with single or multiple signs that may have had some ritual significance or were the names of the owners. At Harappa, tiny bone points that may have been used as hairpins or toothpicks have a miniature inscription at one end. The sign is too small to be visible at a distance and clearly was not a public communication; possibly these were personal identification marks or protective symbols.

One of the most exciting discoveries of the use of script resulted from the re-examination of gold ornaments excavated from Mohenjo-daro in the 1920s. A large collection of gold objects found together in a copper vessel included four ornaments with minute inscriptions that probably represent the names of the owners scratched on to the polished surface. It is possible that before this wealth was hidden away, the names of owners were incised on some of the gold jewelry. All inscriptions appear to have been made by the same sharp, pointed tool and by the same hand. These inscriptions are



Indus inscription on a bronze tool

Inscribed Material from Various Harappan Sites

____ Site Seals Tablets Copper Bronze Other Total
____ Mohenjo-daro 1,232 119 135 5 49 1540 Harappa 350 288 3 344 985 Chanhu-daro 58 3 1 4 66 Lothal 89 75 1 165 Kalibangan 56 21 2 20 99 Other Sites 13 4 17 34 West Asia 16 1 17 Total 1,814 511 135 12 435 2,906

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extremely important because they are clearly different from the types of inscriptions found on the large copper celts and chisels which also have been found in large hoards.

Another written object is known that is quite unique. During their 1989-1990 season, the excavators at Dholavira uncovered a line of nine huge signs in the Indus script, made of a white crystalline material, lying in a side chamber of the North Gate to the citadel. The signs were about 37 centimeters high, and their widths ranged from 25 to 27 centimeters. They had probably originally been set on a board, probably of wood, displayed over the gate. Its location at the boundary between the citadel and the outside world suggests that the text probably had a religious significance, perhaps purifying or blessing those who passed under it. It is possible that comparable inscriptions existed in other cities

and towns; given the fragility of the Dholavira lettering, the extant traces of this signboard clearly survived only by extreme good fortune.

The above review shows that whilst some of the raw materials were inscribed with the Indus signs, others were stamped, or even cast, providing a bewildering variety. For example, there are examples of signs being both inscribed on ceramics before they were fired, as well as later being scratched on after firing. This variety is also found withid the corpus of objects bearing the inscriptions. These objects range from inscribed seals, tablets, tools, vessels, bangles, ladles and other objects to sealings and mouldings.

Lost Media? The literate Mesopotomians obsessively recorded everything and it is improbable that the Harappans, being intimately involved through trade with them, could have resisted the urge to use their own script in ways beyond the uses revealed by the surviving media. It therefore seems probable that the Harappans also used other media of which no trace remains.

In more recent times many perishable media have been extensively used in Pakistan and the surrounding region for writing: wood, cotton cloth, bark, palm leaves, and parchment, all of which, if used by the Harappans, would long since have decayed away. The absence from the Harappan repertoire of the clay tablets that were so much used in the Near East may well reflect the ready availability of these perishable media, which were more portable, easier to store, and less fragile than unfired clay. In Egypt, where a comparable writing medium was made from papyrus plants, it is only because the arid climate was favorable to its preservation that such texts have survived (17).

In modern Pakistan, children in school use wooden boards to practice their handwriting. These are covered in a white substance, a particular type of clay, and can be wiped clean after use, ready for the next day's work. Two terra-cotta objects from Mohenjo-daro have exactly the same shape as these wooden writing boards, a rectangular surface with a short handle at one end; they may be models of wooden originals or may even have been used as writing boards themselves, covered with an appropriate writing surface. Two signs in the Indus script may represent such writing boards; these are composed of a square with a line rising from its top; one is blank and the other bears horizontal lines that may represent writing (17).

The idea of possible use of perishable media which the Harappans could have used for writing longer texts than those observed on steatite seals and tablets has been recently pooh-poohed by Farmer and his associates (24). Arguing against the Harappan use of any lost media, they point to the absence of any writing equipment such as ink and styli, though one may counter this by pointing to the absence also of the paints and brushes that were certainly used to decorate pottery and that could also have been used to write. We pick up this issue again in Chapter III.3.

The "Type" of the Indus Script: A writing system is primarily defined as a set of visible or tactile signs used to represent units of language in a systematic way. In other words, writing is the use of symbols for sounds, ideas, or objects, mutually recognizable by the society. This simple explanation encompasses a huge spectrum of writing systems with vastly different stylistic and structural characteristics spanning across many regions of this planet. The major writing systems, i.e. methods of inscription, broadly fall into three categories: logographic, syllabic, and alphabetic. An additional system is pictographic, which is sometimes recognized as a precursor of logographic system.

A pictograph is the representation of the content of a message by a picture or a sequence of pictures.

However, the pictographic writing is not true writing, since it does not record speech itself but reflects speech content. Most early scripts began with pictorial signs, but even for the most obvious pictograph the meaning represented was that agreed on by its users, which did not necessarily match its pictorial meaning. A pictograph might cover a range of related meanings (for example, a sign might mean both "legs" and "to walk"). Initially the signs represented objects, but they soon came also to stand for sounds. The range of words that could be represented was now extended by punning (the rebus principle): using a pictograph to represent a homonym, a word that sounded the same (or almost the same) but had a different meaning. Further meanings could be achieved by ligatures (for example, "bee" plus "leaf" making "belief") or by modifying a sign (for instance, changing a jar sign in various ways to signify a jar of honey, beer, or milk). The Egyptians of the Bronze Age employed an extensive pictographic system of writing of which emerged their *hieroglyph*.

A *logogram* is a simplified pictogram, a written character, which represents a word or *morpheme*. The vast array of logograms, which are needed to write a language, is the major disadvantage of the logographic systems over other systems. However, the efficiency of reading logographic writing, once it is learned, is a major advantage. No writing system is wholly logographic: all have phonetic components as well as logograms. The main logographic system in use today is Chinese, used with some modification for various languages of China, Japanese, and, to a lesser extent, Korean in South Korea. The Indus script is sometimes thought of to be a logographic system of writing with strong elements of pictographs. The pictorial features suggest it to be at an elementary stage of evolution but sufficiently standardized in its cultural milieu.

The Indus script uses a large number of signs. Some are unambiguously pictorial, such as the (headless) stick figure. Many seem abstract, and many others appear to be pictorial but it is not clear what they show; for example, a sign that looks like a jar with handles might, alternatively, represent a cow's head. A few signs appear very frequently, with the most common twenty signs accounting for around 50 percent of the content of the inscriptions over the whole corpus. Some are known from only one occurrence (and are known as singletons), while many others occur only a few times.

Yadav and Vahia (20) analyzed the structure of all signs in the sign list of Indus script and visually identify three types of design elements of Indus signs, namely basic signs, provisional basic signs, and modifiers. These element combine in a variety of ways to generate the entire set of Indus signs. By comparing the environment of compound signs with all possible sequences of constituent basic signs, they show that sign compounding and sign modification seem to change the meaning or add value to basic signs rather than save writing space.

Early scripts were devised to serve a restricted purpose or purposes, and it was adequate to use signs that just represented word stems or roots, with the appropriate form of the word being understood from the context. As the uses of the script diversified, the need to supply this information developed, and signs came increasingly to be used phonetically, often as single syllables, though logographic use also continued. Individual signs might by now have many possible semantic or phonetic values, so some scripts added extra, silent signs to aid identification of the value being used: semantic determinatives to indicate which of several alternative meanings was intended, and phonetic complements that reproduced part of the sound of the appropriate word. These developments took place in the Near East (including Egypt) from the late fourth through the third millennia, and later in China and Mesoamerica. In Mesopotamia, many modifications of the script, which had been developed to write the Sumerian language, took place as a result of the difficulties that arose when

using it to write the quite differently structured Akkadian language. At the same time the signs in the Sumerian script were simplified to make them easier to write, and the pictorial aspect was lost. The predominant use of pictures as abstract symbols is thought to be a precursor of *logographic* system of writing.

While some scripts continued to be logosyllabic, by the late third millennium several scripts in the Near East used mainly *syllabic* signs. These allowed the sounds of speech to be reproduced more economically and efficiently. A syllabary is a set of written symbols that represent syllables. A glyph in a syllabary typically represents a consonant followed by a vowel, though in some scripts more complex syllables (such as consonant-vowel-consonant, or consonantconsonant-vowel) may have dedicated glyphs. Most logographic systems have a strong syllabic component. Some researchers imply that the Indus script is syllabary system.

A further development took place during the second millennium BC when Semitic speakers took the initial consonant of their own words for the pictorial meaning of a number of Egyptian hieroglyphs and assigned this consonantal value to a modified form of each sign, creating the first alphabet. From this developed all other alphabetic scripts of the world, including those of South Asia. (A roughly contemporary cuneiform alphabet, also devised in the Levant, was short-lived.) The Greeks developed a version more suited to their language in which vowels were also marked. In principle alphabetic scripts have a single sign for each phoneme (vowel or consonant), making it possible to write down any word so that its pronunciation is unambiguous; alphabetic scripts can therefore be adapted to render any language.

An alphabet is a small set of symbols, each of which roughly represents or historically represented a *phoneme* of the language. In a phonological alphabet, a writer could predict the spelling of a word given its pronunciation, and a speaker could predict the pronunciation of a word given its spelling. As languages often evolve independently of their writing systems, and writing systems have been borrowed for languages they were not designed for, the degree to which letters of an alphabet correspond to phonemes of a language varies greatly from one language to another and even within a single language. In most of the alphabets of the Middle East, as well as the languages of modern Pakistan only consonants are indicated, with optional diacritics, i.e., *zaber, zer, pesh*, *shadd*, etc. to represent the vowels. Alphabetic system of writing stresses the sound of the language while the syllabary and logographic stress the depiction of an idea or the object.

In the Indus script, the number of known signs is around 400 to 450, depending how one defines a primary symbol. This number is too high for the script to be syllabic or alphabetic, and too low to be logographic. The word division is rather long in syllabic and alphabetic systems and isolate in logographic system. In the Indus script word divisions are not marked, but there is a good number of inscriptions comprising only one, two or three signs, and many of the longer ones can be subdivided into such units. Thus, on both accounts the Indus system does not fall into any of the above mentioned three basic types of scripts, as do several other scripts.

In order to get out of this difficulty, a hybrid type of writing system has been proposed to describe the Indus script. This is the so-called logosyllabic writing system. Logo-syllabic system of writing is not unique to the Indus Valley: it has been a feature of some other writing system as well. For example, the logographic systems of writing in Egypt and Mesopotamia gradually transformed into logo-syllabic systems, which, in turn, gave birth to syllabic and alphabetic systems. The number of writing

symbols used in the Indus writing correspond to the number actively used in these logo-syllabic scripts at one time. The word length of two or three signs also corresponds to the general characteristics of such systems.

In a logo-syllabic system a single sign can mean either a word, a syllable or a sound. Most scholars think that in the Indus inscriptions two or more signs would represent either a complete word or a sentence of several words and grammatical indicators. True, some of the signs do look like pictographs, for example a fish, or a man holding a bow. When used individually, such signs may have represented ideas or words, or even entire stories. For some, this conclusion is a happy compromise but for others it is nothing but a cop-out.

Some Characteristics of the Indus Script: Although Indus script has not yet been deciphered, the research work during the past century has recognized a few characteristics of this writing system:

Direction of the Writings : Various lines of evidence have satisfactorily demonstrated that the Indus script was written from right to left, in rows from the top downward, in a manner in which all the present languages of Pakistan and the neighboring Afghanistan and Iran are written. (This is the direction of the text on tablets, objects, and sealings. The seals were cut the other way round so that they could be read in impressions on sealings and elsewhere; seal texts are therefore reversed before being studied.) Inscriptions that do not fill the whole upper line on a seal always begin on the right. Ones that run over on to another line generally start again on the right side, though a few run around onto the next line going left to right (backwards but continuous). Sometimes the writer started on the right using normal-sized signs but ran out of space toward the end and cramped the last few signs on the left or progressively reduced their size. In some instances, one sign overlapped its neighbor, the left-hand sign partially obliterating the previously written right-hand sign. One unusual inscription ran round three sides of a seal: The first line was complete; the seal was then rotated through 90 degrees clockwise, and the next line was written in the space remaining to the left of the first line; this was repeated, the third line finishing before the left edge of the seal.While this reversibility is confusing for archaeologists and linguists, it must have been quite normal for the people who were writing and using the script.



It is generally agreed that the Indus script was written right-to-left, but examples are found where the writing seems to be from left to right. In the above two tablets

found at Harappa, the same inscription is written in two opposite ways.

Mahadevan (25) used internal evidence to prove conclusively that the direction of writing was right to left. His studies had shown that certain signs regularly appear in a particular position in the inscriptions. Specifically, the "handled jar" sign is frequently at the left-hand end of the text, while certain others, such as the "chakra" (an oval divided by six lines), frequently appear at the righthand end, and several regular combinations of signs are written to the right of the "handled jar," to the left of the "chakra," and together elsewhere. By looking at the signs that were written on the second line when text was broken into two lines, Mahadevan was able to demonstrate that the "handled jar" comes at the end of texts and that the "chakra" and others from the right side come at the beginning. In spite of the general agreement to the direction of the Indus writing from right to left, some Indian scholars insist on the direction of writing as being left to right, obviously trying to connect the Indus script to the later-day Brahmi script.

Lack of Change in the Indus Writing System: With one or two possible exceptions, no one has detected any change or development in the writing system over the 600 years of the Mature Harappan period, although it makes little sense to suppose that such a system was invented and then used for hundreds of years throughout the entire Indus region without any modification. It is quite possible that research has not yet been done into this aspect of the Harappan tradition



Copper tablet from Harappa with raised script (Kenoyer)



A short molded tablet with Indus script

and that if the matter is given sensitive attention, evidence of change and variation in the Indus script will emerge.

An alternative explanation for this static nature of the Indus inscription is that it was not a script at all and the inscriptions only represented some magical or protective notations of religious nature. Experience in historical cultures has shown that such notations or formula amulets do not change

much with time. An example of this is the outline of a palm (representing the hand of Ali) that has been in use as an auspicious symbol among the Muslims of Iran, Afghanistan, and Pakistan for the past one thousand years. So is the case with *Imam Zamin,* a written amulet, encased in a leather pouch or enclosed in a silver encasing, worn around the neck or fastened around the upper right arm; its formula, or the mode of its encasing, has not changed for the past several hundred years.

Number of Inscriptions: Detailed studies of the script depend on the availability of reliable published copies of all the inscribed objects (currently numbering around three thousand seven hundred) and their background information. Mahadevan (25) compiled a concordance in which he listed all the texts then available, using a font generated to match his sign list. He accompanied this with background information on the settlement where each text was found and the design (or field symbol) on each seal, along with some analyses of the frequency and distribution of individual signs, within the texts and with respect to site and field symbol.

Parpola and his associates produced several such concordances but, dissatisfied with the quality and completeness of the data with which they were working, Parpola embarked on the mammoth task of producing a complete photographic record of all known inscribed Harappan material. Three volumes have now been appeared. Wells (19) has produced his own electronic corpus of the inscribed objects, along with much more detailed information on the find context of each.

Mahadevan included 2,906 texts. The number has not changed substantially since then, although several new seals and other glyptic materials have been reported from new excavations at Harappa. A few inscribed seals have also been found at Dholavira, and a few more from sites in Cholistan. The total number might have grown to something approaching 3,800. This does not count most of the graffiti that occurs with great frequency. If these are included in the count, we are probably dealing with about 4,000 inscriptions. Another estimate puts the number of objects bearing the Indus script at 4,200. Using this concordance, about 87 percent of all Indus inscribed materials come from Mohenjodaro and Harappa. The large number of “other” objects from Harappa reflects the presence of 272 ‘miniatures’, very small objects inscribed with simple inscriptions.

All these corpora suffer from a major dilemma: The raw data from the inscribed objects have to be recorded in a manageable form before they can be analyzed. The task inevitably involves some loss of preci



A clay sealing found at Harappa

sion due to the decisions on sign identity taken by each scholar in compiling the sign list. As a result no one has an exact count of the number of inscriptions.

The Total Number of Individual Signs: An essential first step in studying the Indus writing system is to identify and count the repertoire of signs. This is far from straightforward and the exact number of Indus signs is an unresolved question. This is principally due to the fact that what could be considered one sign is open to interpretation. No one is quite sure which are variants and which are signs unto themselves. The number of individual signs is important for several reasons. It sets the limit on the number of signs to be deciphered as well as determines which signs might be related and therefore have similar meanings or functions in the writing system. It also plays a role of fundamental importance in an examination of sign frequency, which can be a source of many clues and productive lines for research for the would-be decipherer. The thinking of some scholars is reflected in the widely divergent number of signs they assign to the total size of the script.

Many signs look similar. Some are likely to be allographs, that is, different accepted ways of writing the same sign. Others, however, must be different signs, with different semantic or phonetic values. The problem is to distinguish between these possibilities. A related problem is that of ligatures. Ligatures are signs combined in various ways: by joining them with a line, by writing one inside another or one above another, or by superimposing parts of one sign on another. Some ligatures are composed of more than two signs, sometimes as many as six. A ligature may also be formed of a sign and another element that does not appear as an independent sign. Establishing the boundaries of signs requires analysis of the sign sequences throughout the corpus, for example, to determine whether two parallel lines with a different sign between them represent three separate signs or a single ligature. Ligatures may be a space-saving device, allowing a complete word or phrase to be written as one, in which case they should be broken down into their separate components. Alternatively, the ligatured sign may express a meaning obliquely related to the sum of its parts or differing entirely from all of them, in which case such dissection is not helpful.

A number of attempts have been made to establish a complete sign list, beginning with G. R. Hunter in 1934. Iravatham Mahadevan, Asko Parpola, and Bryan Wells have done extensive work in this regard. These differ considerably in the number of signs they arrive at: Mahadevan distinguishes 419 signs, Parpola 386 plus twelve possibles, and Wells 676. These numbers are the results of long considered decisions on the status of individual signs and potential allographs and ligatures. The sign lists form the basic tool when analyzing the texts to detect structure and eventually the meaning. Lumping together signs that are different and separating out signs that are the same obviously affect the outcome of statistical analyses. It is an extremely difficult exercise, and new data necessitate constant revisions.

After careful comparison of all the different signs, most scholars agree that there are between 400 and 450 different signs or graphemes in the Indus script. This number indicates that the writing system was not like our twenty-six-letter alphabet or as expansive as Chinese and Japanese writing, with thousands of logographic characters. It also suggests that the writing system was based on syllables, or something akin to them, and was neither alphabetic nor logographic. Virtually all scholars who have studied the Indus script agree on this point and have used the term *logosyllabic* to describe it.

The Length of the Inscriptions: The majority of Harappan texts are very short, around one to eight signs; fewer than one in a hundred has ten or more signs and quite a few have only one. The longest text (on the faces of a triangular prism) is twenty-six signs but is probably composed of three shorter

inscriptions. The longest continuous text is seventeen signs. In part, this reflects the nature of the texts, most of which needed to convey very little information. Those on the seals probably gave brief information or a protective invocation or charm, or a dedication.The texts repeated on the mass-produced tablets seem likely to have been stock inscriptions, such as records of standard offerings or formula benedictions such as the *taweez* that are sold in the inner city of Lahore and Multan.

While this may provide an adequate explanation for the inscriptions' brevity, the latter could also be due to the use of many logographs and relatively few syllabic signs. This is probably consistent with the large number of rarely used signs in the script. Another possibility is that the use of ligatured signs, relatively common in the Indus script, reflects a tendency to agglutination (The term *agglutination* refers to the morphological process of adding suffixes to the base of a word), so that one ligatured sign may be composed of a number of morphemes, encoding a phrase or sentence.

Uses of the Harappan Script: As stated earlier, the Bronze Age inhabitants of the Near East, especially those of Mesopotamia, left behind a large number of clay tablets which were inscribed while wet with a stick-like stylus, then sun-baked to preserve the *cuneiform* markings. The clay tablets of Mesopotamia extend over a 3,000-year period, are written in several languages, and provide a fascinating window into early civilizations of the Near East. These tablets primarily functioned as a record-keeping vehicle for commercial transactions or administrative procedures. There are also texts that served as "copy books" for the education of future scribes. Eventually, cuneiform script was used to produce some of the greatest literary works in recorded history. The Mesopotamians also left behind a large number of seals, which they used as personal identifiers and a token of authority.

It was but natural that the early archaeologists working in the Indus Valley ascribed to the Harappan seals and tablets the same functions which were reported from the Near East, namely administrative but more so as a means of self identification and as an instrument of administration and trade. Although the story did not jell completely, it was repeated so many times by so many scholars that it became an article of faith. Even now, when alternative uses have begun to be discussed, most of the archaeologists and prehistorians continue to play on the theme of personal identification, trade and commerce. The animal icon on the seal was given the purpose of identifying the merchant or his clan and the brief line of script on top to say something about the goods, its quantity, and handling instructions. Without naming names, statements like the following abound in the present-day archaeological literature even by some prominent archaeologists of the Indus Valley:

“The Harappan state had an efficient internal distribution network and organized flourishing overseas trade, supplying goods from far and wide to people in every corner of their realms. The sealings that occasionally survive through being accidentally fired bear witness to the management of this distribution; their backs show they were attached to goods in transit packed in cloth bales, sacks, or jars, probably both to prevent unauthorized opening and for identification. The seals used to impress these sealings bore a design and an inscription, and they were carefully made objects for long-term use. The message they conveyed was therefore one that needed to be repeated unchanged, over a long period, as the wear on some examples shows.”

In view of the obvious difficulties in sustaining such an image, some concessions have recently been made to this generalized description. McIntosh (17), for instance, argued that “ .... sealings both supplied general information, allowing packages to be correctly handled, and identified the sender. They may have not been used to provide the ephemeral information on the packages' contents, which

were likely to vary in detail with each shipment even if the same types of goods were regularly dispatched, or the similarly variable instructions on what was to be done with the goods. This information might have been conveyed by word of mouth, but it is more likely that it was written down in an invoice that either accompanied the goods or was sent separately. Records of goods dispatched, issued, or received may have been less essential, but comparison with other early states suggests that these may also have been kept. The absence of any evidence for invoices or records [in the Indus Valley] seems more likely to reflect the use of perishable media than a Harappan failure to use such records at all."

Seals for stamping a personal and official insignia onto goods or documents are employed in many societies throughout the world. In ancient Mesopotamia seals were used by people from all walks of life, and the same is true for modern Japan, where personal seals are commonly used to sign letters and commercial transactions. Throughout the Middle East, Central Asia, Pakistan, and India, seals were used by kings and emperors to sign treaties and personal letters and were considered a proof of authentication. The seals of the Indus cities were probably used in much the same manner, and even though broken seals have been found scattered in the debris throughout the cities, they were probably used only by powerful merchants and wealthy individuals who owed commodities that could be traded in large quantities or over long distances. So the general argument goes.

It is generally believed that the animal portrayed on the seal, such as the so-called unicorn, was the totem insignia of the merchant family or his clan, and the inscription on the top was the message or some sort of commercial record. We are, however, confronted by the fact that an overwhelming majority of the Indus seals portray the unicorn, no matter where such seals have been excavated from. If the unicorn represented the identification of the merchant or his clan, it must be a huge clan that inhabited over the entire area of the Indus Valley. Furthermore, many seals, recovered from a wide range of sites, carry the same inscription. The discovery of duplicate seals or tablets made with molds obviously negates the notion of the Harappan inscription as encoded speech or even identification tags.

All this strongly points out that the iconographic insignia and the accompanied inscription on the seals must have had some other significance, most likely akin to the charm depicting an outline of a hand, which has been so commonly observed in varied situations throughout Pakistan, Iran, and Afghanistan for the past several centuries. Another example is the widespread practice of affixing three digits, 786, written in the same sequence, on the facade of many buildings in modern Pakistan and as the first written notation on letters and documents. Again, it serves as a mantra for an auspicious beginning. It is immaterial if anyone can 'read' the sign or understand its hidden meaning; what is important is that it brings you good luck. Although the inscription on the *Panjtan Pak* emblem or the numerals "786" are readable and in one sense do represent a script, they do not convey any message, nor do they record any event, describe any goods, note any ownership, or serve as identification mark.

The function of tablets, carved in positive and having no boss on the reverse is even more complicated. These tablets appear to have been used exclusively in large cities, because only one or two examples have been reported from each of the smaller settlements such as LothaI, Chanhudaro, and Kalibangan. Some of these are molded objects, but none of the actual seals or molds used to make these tablets have been found from any of these sites as the main production center was probably at Harappa. These inscribed or molded objects are clearly not seals. Additionally, they have been found

in duplicates, often quite in numbers. Since these tablets have numbers on one side, they are thought by Kenoyer as representing some accounting system. But these tablets could not have been used in the same fashion as those in Mesopotamia: whereas in Mesopotamia a scribe could immediately write down the accounts on a clay tablet, the Indus tablets made with a complicated technological process involving lengthy manufacture could not be for onthe-spot accounting. Alternatively, it has been suggested that the Indus tablets may have been used as tokens, made up in advance and distributed when goods were brought into the city as tribute or for sale. Others consider them more like votive offerings or amulets, perhaps bearing an auspicious message or prayer. On some tablets a jar sign forms part of the inscription or accompanies the number, and occasionally they also bear an image of an individual making an offering to a tree or seated deity; Parpola interprets these as records of offerings.

The agreement on the use of seals as instrument of trade or a mark of personal identification is, therefore, not universal and there is an opinion among some archaeologists, and rather a strong one, that the function of the Indus seals and the writings on them was nothing to do with trade and that they and their impressions served more like amulets and magical marks, akin to the potter’s marks, which were believed to carry some supernatural power, imparted the object a good omen or a safe passage, and protected the bearer of the seal or its imprint from harm. Probably, each symbol represented certain blessings or invoked certain protective spirits. It appears that some inscribed symbols or combinations of symbols became so popular that the seals and tablets with these inscriptions were mass-produced through the use of molds. In this respect they served as mass-produced ‘formula’ *taweez* so common among the Indian Muslims and parts of Pakistan and Afghanistan. These inscriptions on parchments, or pieces of paper or slivers of cotton fabrics, are “writing” in one sense but they definitely neither convey any message nor encode any speech.

The use of the Indus signs, whether considered as script or relegated to a status of nonlinguistic notations, is still not clear but their relation to religious beliefs is unmistakable. It is well possible, in fact more likely, that inscribed on the inside of a plate, affixed of a seal on a bundle of goods, or scratched on the interior of a terracotta bangle, the Indus signs may have blessed the food, protected the wearer of the seal, and safeguard the goods in transit or storage. In this sense, the Indus script appears to represent protective or magical powers, same way as the *taweez* represent the “power of the word”.

Evidence for a nonlinguistic function of the Harappan seals and inscriptions is gathering for some time, but this theme has attracted very little attention from the mainstream archaeologists and prehistorians so far. As Farmer et al (24) stated, one reason that they shy away from considering the magical or nonlinguistic nature of the Harappan inscriptions is probably the natural consequence of the hypothesis: the Harappan Civilization emerges as an illiterate society and this goes against the academic careers of many scholars who have worked so hard to built them over the years. Since this possibility seems so real, we devote a full chapter (Chapter III.3) on this theme in this book with the aim that it may advance the discussion of the Indus script beyond the present impasse. In the meantime, the question remains open.

Hundreds of seals, terracotta tablets, and pottery pieces represent a set of Indus inscriptions. The writing style remained static throughout the 700 years long period of the Harappan Civilization and then it disappeared completely with the disappearance of the urban life in the Indus Valley and beyond. If it was really a script that reproduced the language(s) of the land, its disappearance with the lost of

urban civilization is understandable, but how do we explain this vanishing act if the inscriptions were not the encoded speech but rather a manifestation of the Indus religion? Religious belief and practices do not disappear that quickly! But, then, how do we explain the vanishing act of these seals and tablets almost abruptly as soon as the Harappan Civilization wilted and came to an end? Would not the superstition and religious beliefs linger on for some time?

Conclusion: Indus script is a very fascinating subject indeed. Although we have been intrigued by these mysterious symbols for the past 100 years or so, we have not been able to know their real nature. Whether they were the components of a linguistic system of writing or a collection of religious, social, or political symbols unrelated to any language, is not known for sure. If the Indus script did indeed represent a written language, no one has so far even come close to deciphering it. In that process, however, we have learnt a lot about the Indus Civilization itself. If nothing else, the Indus script, linguistic or symbolic, represents a shared set of beliefs that was spread out over an extremely large geographical area. These shared beliefs and conventions must have played an important role in the integration of the urban and rural populations and would have been reinforced by the exotic ritual items obtained through trade or created by new technologies.

A curious feature of the Indus script is that it does not seem to have been expressed in texts or economic documents: there are no lists, ledgers, letters, or law codes. It may have been that the Indus scribes used a perishable material, such as cloth or bark, to compose longer documents; both materials served as paper in historical times. But after a lot of digging there is no evidence for them today, and this may suggest that we only know the principal cultural contexts of Indus writing which is quite unlike Mesopotamia and Dynastic Egypt. The context for early writing in these civilizations, or archaic states, was administration. In the Indus Valley it seems to be anything but administration.

Single and multiple signs were carved or incised on objects that were a part of daily life: shell and terracotta bangles, beads, pottery and tools. The written symbols were also carved on seals in the negative so that their impressions could be affixed as many times as desired on plastic materials, such as clay, and then affixed to a bundle of goods for protection against tampering, or denoting the ownership of the goods. Most literate societies of the Bronze Age also used their writing to record economic transactions and to glorify the deeds of their leaders, perpetuating their mythologies, and recording instructions for the benefits of their next generations. The Harappans do not seem to have recorded such material and if they did, those records are not now available to us, possibly for their perishable nature.

Although it seems unlikely that the Harappan polity could have functioned as efficiently as it obviously did without using some kind of recording system, opinions have started to be expressed which deny the Indus signs the status of a script, that is, a system of encoded speech. According these views, the Harappan inscriptions were not true writings but rather a collection of magical signs rooted in the religious beliefs of a non-literate society. We discuss this aspect of the argument in Chapter 3 in some details.

All in all, it appears that the surviving inscribed objects served only some of the potential functions of writing, probably including personal or official identification (seals as badges), the marking of ownership (possibly names on artifacts), the prevention of tampering (sealings), the management of distribution (seals and sealings), and dedications, spells, prayers, or benedictions (miniature tablets, copper tablets, inscribed artifacts).

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Chapter III.2

Deciphering the Indus Script



The Indus inscriptions on seals, tablets and other media have been studied by many scholars for over a century, but there has been little progress so far in deciphering this interesting and elegant script. There are several significant reasons for this difficulty. Most of the Indus writing are very short texts: the average number of symbols on the seals is only 5, and the longest example contains only 26. This means that we probably have no complete sentences but mostly just noun phrases. There are no clearly distinguishable word dividers, which have been of great help in the analysis of, for instance, the Aegean scripts. The language actually used by the Indus people is still unknown, although several theories abound (see Chapter III.3).The script is not obviously related with any other known writing system which could help define the phonetic or pictorial values of the Indus signs. To this date there have been no bilingual texts discovered to assist in solving the language mystery. And, though numerous signs are clearly pictographic, many are so simplified that it is virtually impossible to understand what they depict. None of the earlier decipherments is directly comparable to the problem of the Indus script: most of them were based on a translation of a text in the unknown script into a known script and language. Even worse, historical information, such as was available from the Bible and the Greek historians in the case of the Persian, is almost totally missing in the case of the Indus Valley. The script was forgotten long before the earliest preserved literary records of the Indus Valley were composed, so the later sources tell us nothing about the Indus Civilization.

These reasons are formidable by themselves but they have been further complicated by some extraneous factors which relate to the approaches to the research. For instance, very often the material has been manipulated in unacceptable ways to fit preconceived ideas. Apart from this, the most popular method has been to equate Indus signs with similar-looking signs of other, readable scripts, and to read the Indus signs with their phonetic values. This method, however, works only when the scripts compared are closely related, and even then there are pitfalls. It is true that some Indus signs have close formal parallels in other ancient scripts but each of these parallel signs represents a different language and has a different phonetic value, even if the meaning is the same or similar.

With no definite knowledge of the underlying language, and no samples of translations of the Indus writing into another known language, researchers have little to go on in their quest to decipher the script. No wonder, then, that after about fifty published attempts at deciphering the Indus script, the problem remains unsolved. Confronted with these impediments, the task seems to be hopeless but we have a number of successful decipherments to look back to, both as potential models and as sources of inspiration, which reassure us in the indispensable belief that seemingly impossible feats can be achieved.

Some preparatory tasks have proved useful in the decipherment attempts on the Indus script. As discussed in the foregoing chapter, the texts have been published both in photographs and in standardized, computer-drawn form. Concordances systematically recording all occurrences of individual signs and their sequences in the texts, and various other kinds of statistics have been

prepared. Compilation of a reliable sign list, which distinguishes between distinct signs and their merely graphical variants, belongs to the most fundamental tasks. Much credit goes to Parpola, Mahadevan, Yadav, and Wells for undertaking this mammoth work.

Several reviews of the history of decipherment of the Indus script have appeared in the past, the most extensive of which is that of Posseh (1). In this chapter we review the various attempt at deciphering the Indus script. Fundamentally, there are two principal unknowns to be tackled in the decipherment of any ancient script, namely the script type and the underlying language or languages. Both of these topics have already been discussed in generalities. In the followings we shall touch upon these factors as they apply to decipherment.

Early Decipherment Attempts: Attempts at deciphering the Indus script started even before the existence of the Indus Civilization was recognized. When Sir Alexander Cunningham reported the first known Indus seal from Harappa in 1875, he assumed that this unique find was a foreign import. A few years later he supposed that the seal might bear signs of the Brahmi script from its unknown early phase. After Cunningham, many other scholars also connected the Indus script with the Brahmi script, which was used in India about 1500 years later. Among them was G. R. Hunter, who in the late 1920s studied the Indus inscriptions at first hand in Harappa and Mohenjodaro, and analyzed them structurally in his valuable doctoral dissertation. He compared the Indus script with other early writing systems (2).

Immediately after the discovery of the Indus Civilization became known in 1924, the British Assyriologists A. H. Sayce, C. J. Gadd and Sidney Smith pointed to its resemblance to the Elamite and Mesopotamian inscriptions and compared the Indus signs with the pictograms of the Proto-Elamite and archaic Sumerian scripts. In 1925 L.A. Waddell came out with his book on the decipherment of “Indo-Sumerian” seals (3). The Czech Assyriologist Bedârich Hrozn in his youth recognized that the cuneiform tablets found in Anatolia were written in an Indo-European language, Hittite. He immediately became famous assisted scholars started working on the Indus script independently of each other, one in Russia, and one in Finland. Both teams came to the conclusion that the language was Dravidian. The Russian team was led by Yurij Knorozov, who included a Dravidian specialist, Nikita Gurov. The Russians initially proposed only a few interpretations, but in their final report from 1979, meanings were assigned to all the Indus signs and published a computer analysis of Indus sign sequences (4).

The Finnish team consisted of Seppo Koskenniemi, a computer specialist, Assyriologist Simo Parpola and, of course, Asko Parpola. They were inspired by the decipherment of the Mycenaean Linear B script without the help of bilinguals in the 1950s. They started by preparing a machine-readable text corpus, and published an automated method to classify characters of unknown ancient scripts in 1970. They also published the first computer concordance of the Indus texts in 1973. A revised computer corpus and concordance was published by Kimmo Koskenniemi and Asko Parpola in 1979–82.

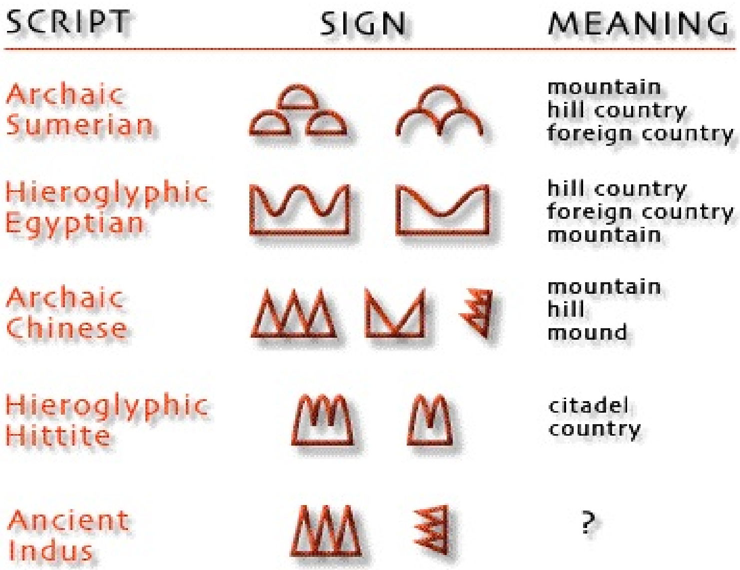


Changes in the logographic representation of objects over time in Chinese script

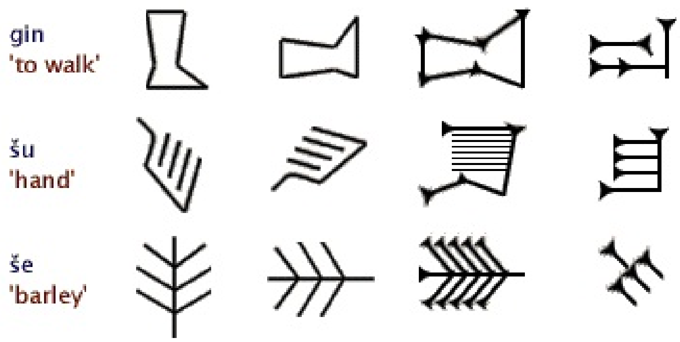
and later on tried to decipher many unknown scripts, including the Indus script. Hrozn’s starting point was an Indus-like seal with three somewhat obscure cuneiform characters, and the resemblance that he saw between the Hittite hieroglyphs and the Indus signs. He read many different signs with the same phonetic value; the resulting texts reproduced a few alleged divine names in endless variations. In 1932, a Hungarian engineer, Vilmos Hevesy, compared the Indus script with the *rongorongo* tablets of the Easter Island. Because the similarities made an impression on the French Orientalist Paul Pelliot, this comparison has been taken seriously although the two scripts are separated by more than 20,000 kilometers and some 3500 years. The comparison is useless also because the *rongorongo* tablets have not been deciphered.

An important step toward the decipherment was to know the language of the Hardpans. In 1964, by coincidence, two teams of computerIn 1971 Asko Parpola went to Pakistan and India to verify their readings from the original objects kept in museums. After discovering there hundreds of unpublished inscriptions, Asko Parpola initiated the project of publishing a comprehensive photographic *Corpus of Indus Seals and Inscriptions* in international collaboration under the auspices of the Unesco. He proposed some Dravidian readings in 1969–70 and his efforts to develop these readings culminated in a book published in 1994. However these attempts at linguistic decipherment did not meet with much success. Parpola himself later described their earlier reports as "written in the first flush of enthusiasm" and "premature and incautious". With rare intellectual courage he abandoned the paradigm central to the earlier Finnish model of decipherment and made a virtually fresh beginning. His revised book appeared in 2009 (5).

In 1974, the British Assyriologist James Kinnier Wilson tried to revive the hypothesis that the Indus language was related to Sumerian in his book *Indo-Sumerian (*6). The Tamil scholar Iravatham Mahadevan, who has done remarkable work in the field of Old Tamil epigraphy, started working on the Indus material in Indian museums in 1971. In 1977, Mahadevan brought out his very useful computer-corpus and concordance. He has published also several papers proposing Dravidian readings for Indus signs based on Old Tamil language.



Comparative meanings of a common or similar symbol in different scripts of antiquity (after Parpola)



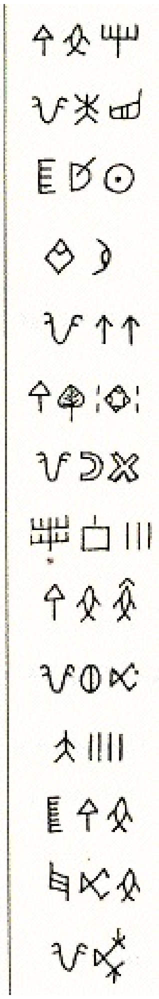
Changes in the logophonic representation of Mesopota- mian script over time to the evolution of cuneiform type of writing

An important attempt to decipher the Indus script was made by Walter Fairservis (7), the distinguished American archaeologist with long experience in Harappan and Early Indus excavations. He manually arranged the Indus sign sequences in a 'grid' to bring out their functional characteristics and syntactical patterns. The analysis was sound; but his model of decipherment based on the Dravidian hypothesis (published in 1992 shortly before his death) was not taken seriously because of his lack of familiarity with the Dravidian languages and linguistic techniques.

In spite of the obvious difficulties in the decipherment of the Indus script and the repeated failures in these attempts, sev eral other "translations" of the Indus script have appeared from time to time. Over fifty different claims at decipherment have been published in recent times, but none of them meets the stringent requirements of the general academic community. Most of these “breakthroughs” have originated in India and all of

these have assumed that the language of the Harappans was either Sanskrit or Dravidian and moved ahead in that context. Generally, these are the ‘scien tists’ and ‘Vedic scholars’, like Rajaram and Misra, who would say anything and bring forth any logic (or non-logic) if it furthers their political agenda. They make quite amusing writings, rather pleasing to the eyes and ears of the ultra-nationalists of India. It is a waste of time to offer a detailed critique on these decipherments because however logical or con vincing they may sound in fur therance of an agenda, they do not represent a decipherment. A bief review of the assumption - that the Indus language was Ve dic Sanskrit - has been given in the first chapter of this section.

S. Gurumurthy retired as Professor of Ancient History and Archaeology, the University of Madras. He made a special study of the graffiti on ancient Indian pottery. His book *Deci*



A partial list of Indus signs

phering the Indus Script was published in 1999 (8). R. Mathivanan has specialized in Tamil etymological studies and was the Chief Editor of the Tamil Etymological Dictionary Project of the Government of Tamilnadu. He has published four books on the decipherment of the Indus script, of which the latest is *Indus Script among Dravidian speakers* (10). S. R. Rao represents a quite different attempt to read the script (11): it is based on a “pre-Indo-Aryan” language of the IndoEuropean family and ancestral not only to the later Indian Brahmi script, but also to the early Semitic alphabet. In two recently published books, Sanskrit scholar and linguistic Madhusudan Mishra puts forth the methodology he employed to crack the linguistic code of the Indus script (12,13,14). The latest attempts are those of Shindig (30) and Vijayendra (31).

It appears that all decipherers of the Indus script made so far have faced the language problem this by a leap of faith: a language was assumed and texts were read in a (proto-)form of that language, with little possibility to check on the accuracy of such translations, except for the countercheck to be undertaken against the general cultural background of the area and time. Obviously, even without going into any details, such 'translations' as "the (aquatic) birds have covered all the waterways" (33) do not make any sense on a document, nor are such sentences



A Harappan tablet with a descriptive scene and inscriptions. Note that the V sign in the script is the same shape as the object in the hands of the figure, possibly a supplicant to a tree

deity. This sign can, thus, be read as an 'offering'. This one example of pictorial reading.

likely ever to be used on seals - at best, one could expect some theophoric names of a similar structure as found in the ancient Near East.

In all attempts of decipherment, the researchers have considered only two possibuilities: the Harappan language was either Dravidian or it was Vedic Sanksrit. It is only recently that other possibilities have started to be taken under consideration. For example, some scholars (1,34) have raised the question whether the Indus inscriptions erre written in an unknown language. A good candidate could be Masica's "Language X" that is found at the bottom, at the lowest level of Punjabi and neighboring New Indo-Aryan languages (35). Some 30% of Urdu/Punjabi agricultural vocabulary are neither Indo-Aryan nor Dravidian; in short, they stem from the unknown substrate language "X" (36).

Michael Witzel's (18,36) work on the substrate of the RgVeda, the oldest text-base source originating immediately after the demise of the Harap

 **Early Elamite script**

pan Civilization, has been discussed in Chapter III.1. In some detail. It clearly shows a substratum of an Austro-asiatic language, such as Munda, in the earliest Books of the RgVeda. This provides us a new vista of linguistic research in connection with future decipherment efforts.

There are several other possibilities which shall not be explored here in detail: the ancestor of the modern Burushaski,

the substrate languages of Kashmir.These and other substrate languages have not yet been explored well; so far, we miss etymological dictionaries of all Indus languages, except Sanskrit. Yet, we have older and better, so far unused sources that help us to determine which language(s) was/were spoken in the area of the Indus civilization. So far, linguists have concentrated on finding Dravidian and Munda reflexes. These studies are summed up conveniently in the

etymological dictionaries by M. Mayrhofer, Th. Burrow, and in the work of F.B.J. In addition, it has especially been F. Southworth (37) who has done comparative work on the linguistic history of India during the past few decades. Above all, Witzel's work on the substrates of RgVeda is of tremendous importance in putting all this research in perspective (18,36).

Common Ground and Lack of Agreement: In 1994 Asko Parpola, chief editor of the encyclopaedic *Corpus of Indus Seals and Inscriptions*, published a book titled *Deciphering the Indus Script* (reissued in 2009). The result of over a quarter of a century's research by a team of Finnish Vedic scholars, Assyriologists and computer scientists, it has been widely recognized by many reviewers as a major step towards the understanding of this previously undeciphered script. Although there is still debate as to the success of Parpola's 24 attempted readings, the book is extremely useful as it clearly defines a number of widely shared conclusions concerning basic typological features of the Indus script such

as the direction of writing and recognition of numerals. One of the most generally accepted common points is that the script was written from right to left, although clearly stamps and moulds were written in reverse. Evidence for such agreement is taken from the common cramping of signs at the left side of seals, the clear overlapping of signs on ceramic vessels inscribed before firing and the comparison between single-line and two-line sequences of identical inscriptions. It is apparent that the vast majority of examples are written from



An alligator eating the fish. The picture of

fish de
picted in this tablet is identical to the fish sign in the Indus script.

right to left, but it should be noted that almost 7 per cent are written from left to right, a factor often interpreted a scribal error. It is generally agreed that numerical value signs are indicated by strokes, short in earlier examples and long in later ones, and as such strokes often occur with groups of semicircles it has also been assumed that the latter represent 'tens'. Mahadevan has further suggested that whilst the largest identified numbers using this system are 35 and 76, it is possible that higher value signs have not yet been identified. Whilst many would accept such value hypotheses, the underlying numerical system is still in debate. In the 1940s Ross suggested the presence of two numerical systems, one with a base ten and another with a base eight (38), but Fairservis (7) suggested a base eight and Mahadevan a decimal base (14). Rather than anyone suggestion being correct, it is quite possible that all are correct as Harappan weights indicate a mixed system, based upon binary, octonary and decimal bases.

Although some scholars have suggested that the Indus script was picto-phonographic (21) or alphabetic (11), Zvelebil has suggested that there is also broad support for the identification of the script as logo-syllabic possessing word-signs and phonetic syllables (39). One of the clearest explanations of such a suggestion is provided by Mahadevan (14). He starts by identifying the four major types of ancient scripts, logo-graphic, logosyllabic, syllabic and alphabetic (14). The first used word-signs, the second used both word signs and phonetic syllables, the third either open syllables or open and closed syllables and the fourth single-sound signs. As such scripts are generally distinguished by the total number of signs used, he concludes that the Indus script's approximate 425 signs are logo-syllabic as logographic used thousands of signs, logo-syllabic used between 900 and 400, closed and open syllabic between 200 and 100, open syllabic between 100 and 40 and alphabetic below 40 (14). Even within this common ground there are a number of disagreements, for example, there is much debate as to the meaning of the signs, in that some may be phonographic and some pictograms may only be understood through the use of homophones-words pronounced the same but with different meanings (14). For instance, Parpola interprets the Indus fish sign through the use of the homophone that in Dravidian and ProtoDtavidian languages the word fish, or *min*, also means star or planet, a link already made by Heras (21). Such debate may also be characterized by the different interpretations ascribed by different decipherers to the Indus sign, commonly called the ‘jar sign’. This sign is the most commonly occurring within the Indus script and has been found in more than 1,000 examples and is thus a crucial element for our understanding of the script. Hrozny interpreted it as a sign for a vessel dedicated to a god or gods (40) and Lal agreed that it was probably derived from a portrayal of a vessel (41). Fairservis interpreted it as a third person singular honorific (7). Knorozov, following Heras, has interpreted the sign as a genitive and locative suffix (42), and Parpola interpreted this sign in 1969 as a ship and in 1994 as 'a title of respect commonly added to proper names, whether human or divine' (5). He also suggested that such a hypothesis did not necessarily exclude the sign from representing a possessive marker and stated that it was probably derived from either the iconic meanings of 'bird', 'eagle', or 'to fly' or a cow's head.

The strong men such as Walter Fairservis, Asko Parpola and his team, Mahadevan, and Knorozov and his Soviet colleagues must be credited with a high degree of self-confidence and having the courage to venture into difficult and "dangerous" intellectual worlds and stay with their beliefs. Through the efforts of these scholars, and others like them, there is agreement on some issues dealing with this writing system. These ideas can be summarized as follows:

- The script is to be read from right to left (seals, left to right, but their impressions right to left).
- The system admits occasional uses of left-toright readings as well as the *boustrophedon* form.
- The script makes extensive use of suffixes, but lacks prefixes, infixes, and inflectional endings.

• The script is best seen as a form of logo s labicwriting.
• The total number of signs tells us that the Indus script is not alphabetic or quasi-alphabetic,
• The Indus script is not closely related to other writing systems of the second and third millennia although some convergence might be found with Proto-Elamite.
• The Indus script is not related to any later Pakistani or Indian script. This includes Kharosthi in Pakistan and Brahmi in India.
• None of the grids have proven powerful enough to lead to decipherment.
• The Indus script is not likely to have been a written form of an Indo-European language since it apparently lacks prefixes, infixes, and inflection endings.
• The Indus script is not likely to be a written form of a West Asiatic language since the attribute is placed after the substantive head of the attributive phrase in them. However, there may be a distant, as yet poorly understood, relationship to Elamite.
• The common supposition that the common ending signs of the Indus inscriptions (e.g., the "jar" sign and the "arrow" sign) represent grammatical suffixes like case endings has not been confirmed.
•12. None of the proposed decipherments of the Indus script can be proven to be true.

While we have the agreed-upon points, there is much disagreement as well. The language affiliation has been proposed to be Dravidian, Indo-European, Sumerian, Egyptian, even Malayo-Polynesian. The method of the decipherer, when method can be determined, ranges from the use of the rebus principle, to the world of tantric symbols. Comparative analysis has been made with scripts far removed from the Indus Civilization, like that of Easter Island. Because of these differences, the various attempts at decipherment have yielded significantly different ‘readings’ of the individual signs. Since no two attempts have so far been in agreement, as their number increases only one thing becomes more certain: that the probability of anyone being correct is correspondingly reduced. With the wisdom of hindsight many of the earlier attempts appear to be abortive, and using similar criteria, many of the more recent attempts show little advance on the earlier.

Logo-syllabic Writing, the Rebus Principle, and Phonetic Readings: There are two ways of trying to decipher an unknown script: through the probable sounds (the pronunciation) of the individual notations, and through extracting meaning of the notations without considering how they could have been pronounced. Both of these approaches have been used in deciphering the Indus script. Furthermore, one must use a known linguistic model that most likely applies to the script in question. Here the pinions differ quite a bit.

Although the agreement is not perfect, most scholars are of the opinion that the Indus script falls in the realm of a logo-syllabic system of writing and that the *rebus principle* applies in the phonetically reading of such ancient scripts. A rebus is an illusional device that uses pictures to represent words or parts of words. It was a favorite form of heraldic expression used in the Middle Ages to denote surnames, for example in its basic form 3 salmon fish to denote the name Soloman. The term *rebus* also refers to the use of a pictogram to represent a syllabic sound. In linguistics, the rebus principle means using existing symbols, such as pictograms, purely for their sounds regardless of their meaning, to represent new words.

Many ancient writing systems used the rebus principle to represent abstract words, which otherwise would be hard to be represented by pictograms. Each sign was originally a picture, denoting the object represented by it. For example, the picture of an arrow meant 'arrow.' But because many things, especially abstract concepts, are not easy to draw as pictures in a simple and unambiguous manner,

the meaning of the pictograms was extended from the name of the depicted object to all of its homonyms, that is, words with a similar phonetic shape but a different meaning. A single sign would thus mean several things or abstract ideas. By definition, this principle implies a plausible identification of how the script functions but at the same time necessitates the identification of the underlying language.

Asko Parpola, I. Mahadevan, and some other linguists have applied these relationships, especially the principle of rebus to decipher a few Indus signs; the oft-quoted example is that of the fish sign and its various modifications. Here the Indus language has been assumed as belonging to the family of Dravidian languages. As stated before, the starting point of Indus language as Dravidian is a big assumption and most likely wrong. Thus rebus principle, even coupled with a number of other considerations, would lead us to nowhere closer to a potential decipherment if the language assumption is not right to start with.

Pictographic Readings: Another approach has been to deduce the meaning of the written symbol, ignoring its sound. If a sign can be recognized from its outward shape what a pictographic sign represents, this gives its “pictorial meaning.” Contextual clues may usggest what a particular sign in a particular context approximately meant; this “intended meaning” may or may not have been the same as the pictorial meaning. If the pictorial and intended meanings of a particular sign can both be determined, and they turn out to be identical, this strengthens the assumed shared meaning. But if the two meanings differ, they may be connected by homophony.

For example, the outward shape of the U- or V-shaped Indus sign suggests ‘pot’ as its “pictorial meaning.” A contextual clue suggests that the “intended meaning” also is ‘vessel’, or more exactly ‘sacrificial or offering vessel’. The iconographic scene accompanying an inscription where this sign is preceded by a number, shows a human being who extends a similarly shaped pot towards a sacred tree in front of which he or she is kneeling. Here the intended meaning of the sign appears to be the same as its pictorial meaning, and it can be understood directly, without any linguistic postulations. We need not know what the object was called in the original language to understand the sign.

There can be no doubt that the stick figure is a person, though this figure may be male or genderless, human or divine. In a few cases, Harappan art confirms what appears to be the pictorial meaning of the sign: for example, the fish sign is identical to a fish shown in a gharial's jaws (see picture below). For many more signs, it is harder to identify their pictorial meaning: one scholar's crab is another's tongs; one sees a cobra where another sees a seated man; a vertical stroke with horizontal lines from it could be a comb or a harrow or even a tree. The art or script of other societies may helpfully suggest possible interpretations of signs: for example, a triangular sign with one exended arm bears a strong resemblance to a hoe used by the ancient Egyptians. These comparisons are useful but cannot have the compelling weight of images identified from Harappan art or later symbolism that may be derived from Harappan iconography.

In some cases, suggested meanings can be ruled out on cultural grounds: For example, the oval or circle divided into six looks just like a spoked wheel, but this interpretation is impossible because the spoked wheel was invented centuries after the sign came into use and thousands of miles away; much more plausible is its interpretation as a *chakra*, a symbol that was part of later Indian iconography, representing royalty and divinity. Or, it could simply represent the sun and its light.

Many scholars have taken the pictorial signs as a starting point in their attempts at decipherment.

Ideally these could yield words clustered around their pictorial meaning and one or several homonyms. It is always possible, however, that a sign was not chosen for its pictorial value, that it had shifted its logographic meaning through time, or that it had become a sign with a purely phonetic value. In addition, in logographic scripts there is often polyphony and polysemy (a number of different sounds and meanings represented by a single sign), so that even in scripts that have been deciphered there is often uncertainty about the selection of the appropriate value.

Unfortunately, the meanings in a pictographic system are not always immediately recognizable.The original pictures become simplified and are eventually reduced to only the essentials of the original picture, such as in the case of the Sumerian cuneiform writing that was eventually reduced to a series of lines and wedges. To interpret such a system, there need to be samples of the different successive forms as the writing became simplified. Documentation of this progression is not available with the Indus writing and hence the pictorial meaning of most Indus signs is difficult to recognize. As in many other scripts, the demand for fluency in writing must have led to a radical simplification of pictographs and the characteristic elements have been reduced to the barest essential. Fortunately this tendency has not gone in the Indus script as far as in the Sumerian one, where the pictorial shapes of the earliest phase soon gave way to abstract cuneiform symbols: if we did not have an unbroken chain of successive forms, it would be impossible to reconstruct their pictorial prototypes.

The pictographic elements of the Indus script are remarkably close to the natural world of flora and fauna, with the addition of some geometrical shapes and material entities of an agrarian culture. There are, thus, simplified figures of fish, crabs, scorpions, fowls, birds, man, bifurcate boughs of pipal trees, thorny branches, segmented circles, squares, rectangles, rows of triangles like a range of serrated hills, upright arrows without feathery ends, sets of three parallel strokes, zigzag parallel lines as if indicating rivers, short vertical strokes, and long vertical strokes varying in number from one to twelve - the larger numbers mostly arranged in rows and columns - and a multitude of other utilitarian objects, such as combs, brooms and dumb-bells. Some other early scripts also utilize symbols that represent agricultural practices and natural objects. It is probably reasonable to predict that pictographs that resemble certain things in one language system may well represent the same thing in another writing system, such as the characters representing a mountain in these various writing systems. This methodology is, however, of limited use because very few parallels exist and the method is based is based wholly on conjecture.

Studying the Signs. As though the reading of basic signs was not enough, the problem of interpretation becomes even greater with compounds. These are often composed of two or more signs from the basic repertoire. Ideally, these should be words or phrases put together from their various parts, but experience of the way scripts behave shows that things need not be so straightforward. Wells (32) has demonstrated a number of cases in which the compound behaves like neither or none of its components, suggesting that the compound is not the sum of its parts. He also identifies some cases in which two signs may be written either side by side or as a compound; these may be alternative ways of writing the same thing or may have entirely different meanings.

Other scripts show that there is a considerable range of possible interpretations of elements added to a basic sign, including grammatical or semantic affixes, indicating inflection or agglutination, diacritics, phonetic complements, and semantic determinatives, not to mention the practice characteristic of evolving scripts of modifying existing signs to create new ones.

The decipherment of alphabetic or syllabic scripts, such as Linear B, is relatively straightforward in that the range of possible values is limited and the discovery of some of the values assists in the interpretation of others, the results interlocking to reinforce each other. In contrast, logographic scripts are open-ended, with the discovery of some sign values providing little or no assistance in interpreting others. The recent decipherment of the Maya script, a logographic script of fiendish complexity, whose users delighted in employing a wide variety of different "spellings" (ways of expressing the same word), provides a beacon of hope that progress can be made in deciphering the Harappan script too (15).

The language problem is crucial in any attempt for deciphering of a script. It is obvious that if the language of an ancient script belonged to a language family not known from other sources, it can never be deciphered. It is essential, therefore, that we assign a known language to the script before we attempt its decipherment.

Concluding Remarks: The samples of Indus writing have been studied by various scholars for over 80 years, but there has been little progress in deciphering this interesting and elegant script, if in fact it is a script in the sense of encoded speech. There are several significant causes for this difficulty. Most of the samples of Indus script are very short texts. The average number of symbols on the seals is only 5, and the longest example contains only 26. To this date there have been no bilingual texts discovered to assist in solving the language mystery. The language actually used by the Indus people is still unknown, although several theories abound.

After several vigorous efforts by western scholars, the field has been intensively harvested by several dozen Indian scholars, each having his or her own political or ideological axe to grind. These efforts are based on assuming a known language of the Harappans or at least a linguistic group to which the assumed language belongs. Two alternative theories are being proposed: the proponents of one claim that the Harappan language belonged to a Dravidian or some allusive proto-Dravidian group of languages, while the proponents of the other claim that the Harappan spoke a language akin to Vedic Sanskrit and the Indus script is antecedent of the Brahmi script which appeared in south India almost a thousand years after the demise of the Harappan Civilization. To this controversy is added by some linguists which proclaim the existence of an AustroAsian language as the predominant speech in the upper Indus Valley. There is also the prospect of an unknown Language X.

Many attempts at decipherment made in the early decades after the discovery of the civilization (and, sadly, some recent attempts) have taken as their starting point untested assumptions and built elaborate interpretations upon these shaky foundation to claim a complete decipherment.These assumptions have involved identifications of the pictorial values of the signs, the underlying language, the general content of the texts, the type to which the script belongs, or its relationship to contemporary scripts or to later ones in the subcontinent, and many of the claimed decipherments involve several of these assumptions. Some have been wild fantasies, such as a link based on superficial similarities in the form of some signs between the Indus script and the very much later and geographically remote *rongo-rongo* of Easter Island (itself, unhelpfully, unreadable). Some have been less wild but still demonstrably wrong, such as those claiming a relationship between the Indus and Brahmi scripts (27).

Others have begun with reasonable and promising hypotheses which have initially yielded clear and meaningful results; these have then seduced the would-be decipherer into believing these hypotheses proven and making assumptions on the basis of them, assigning increasingly arbitrary semantic or

phonetic values to individual Indus signs. This often results in a host of alternative sound values for each sign and a multitude of possible signs for each sound. The foolishness of this approach is reflected in the results: Despite the latitude in interpretation afforded by the final pack of assumptions, the readings obtained are generally extremely odd. These can be exemplified by the now infamous "translation" by Father Heras of one seal text: "The mother of the middle of the year walking ant-like" (27). Each such claimed decipherment includes some readings that look superficially reasonable, accompanied by many more that are nonsensical; clearly a successful decipherment should yield consistent results across the corpus. To use Asko Parpola's analogy, they should interlock like the correct solutions in a crossword puzzle (27).

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Chapter III.3.

The Language Issue



The languages spoken in the Harappan Civilizationnal area have been discussed throughout the last century: the question has, in fact, been debated so heatedly that it has acquired a life of its own. Still, no one has yet

been able to draw a linguistic map of ancient Pakistan, and what language or languages the Indus people spoke is still unknown. Sumerian, Akaddin, Egyptian, Elamite, Munda, Indo-Aryan, Dravidian, and Language X are but a few of the languages, which have been proposed as the language that underlie the Indus script. The Dravidian hypothesis appears to have gained the largest number of backers because the contemporary areal distribution of the Dravidian languages suggests that this language family might have stretched into the Indus Valley when the Indus Civilization was prospering (1). Michael Witzel (2,3), as an alternative to the Dravidian hypothesis, suggests a prefixing language that is similar to Austroasiatic, notably Khasi - he calls it "para-Munda" (i.e. a language related to the Munda subgroup or other Austroasiatic languages, but not strictly descended from the last common predecessor of the contemporary Munda family) - representing the Harappan language. He also alludes to a Language X, a "lost phylum", i.e. a language with no living continuants. In this case, the only trace left by the language of the Indus Valley Civilization would be historical substratum influence, in particular the substratum in Vedic language. This is not the only popular suggestion, however. A considerable number of scholars have asserted that the Indus Valley was inhabited by speakers of Indo-Aryan languages earlier than the coming of the Vedic people in the Greater Indus Valley. This claim has led them to the conclusion that the Indus inscriptions could possibly record an early form of Indo-Aryan language (related but not necessarily the Vedic form).

The relationship of Dravidian and AustroAsiatic languages to the archaic form of Sanskirit (the Vedic language) has lately played a major role in the discussions of Harappan and postHarappan languages and this has generated an intense interest on the part of a large cadre of Vedic scholars in India and abroad. The linguistic and philological studies of early texts, such as RgVeda, is a new area of endeavor. There are numerous studies of this larger linguistic scene and some of them appear to be yielding useful results, some of them acrimonious. In the absence of finding our bearings from the past on the basis of archaeology and textural evidence, we sometimes turn to the present distribution of languages in the country. It gives the researchers some clues to their assumption on the linguistic

affinity of the Indus writing system.

The official language of Pakistan is Urdu, but comparatively few people use it as their first language. Saraiki or Punjabi is probably the most widely spoken language. Other spoken languages are Sindhi, Pashto, and Baluchi. Brohi is another language, spoken mainly in the Kalat region of Baluchistan, and several dialects belonging to Dardian language group are common in the north of the country. In India there are 18 languages officially recognized by the constitution, and in Afghanistan and Iran, the two other borderland countries, Persian and Pashto, along with their variations, are the main media of speech.

Almost all the languages presently spoken in Pakistan, Afghanistan, and Iran are classified as Indo-Aryan or Indo-Iranian. The Dardic languages, spoken in Chitral, are an exception but they are still considered to be derived from some archaic Indo-Iranian group of languages. Brohi is thought to belong to the Dravidian branch of languages but this hypothesis has recently been challenged on the basis that it contains only a small number of words that can be definitely traced back to a Dravidian origin. The languages presently spoken in India fall either into Dravidian or into Indo-Aryan group: those in the South being Dravidian and those in the North, largely IndoAryan. There are, however, some pockets of population in the East and the North whose languages neither belong to Indo-Aryans nor to Daravidian classification: they fall into the language family group of Austro-Asiatic. Munda is probably the most well-known of these languages. There are also some pockets of population in the Northeast where languages of Tibeto-Burmese group are spoken.

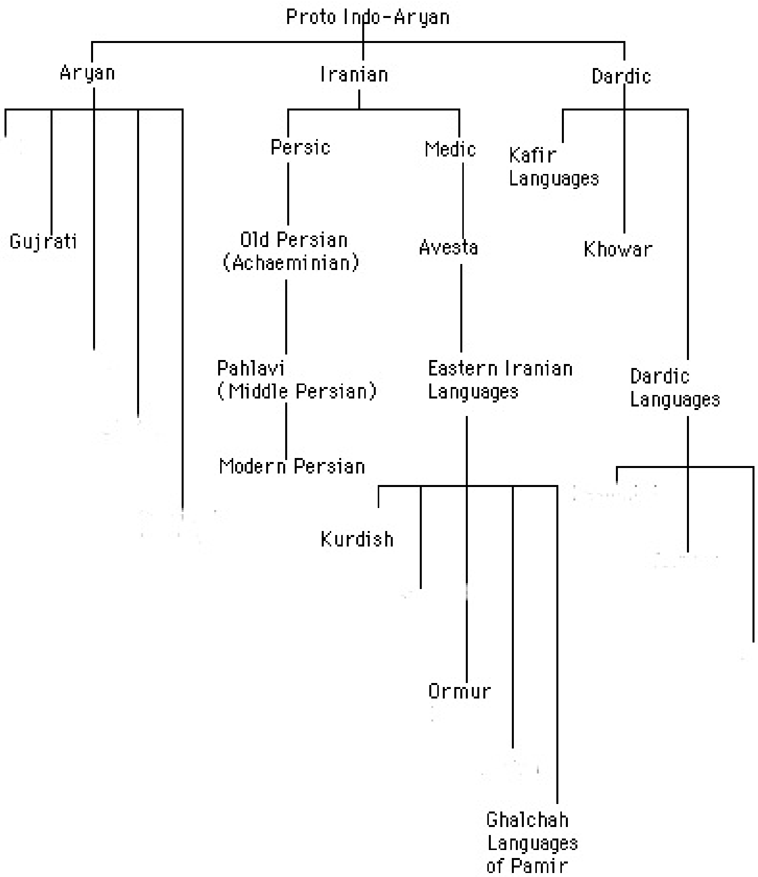
Was it one language throughout the Indus realm, or were there many languages which could be written and read through a common script, just like several languages of modern Pakistan are written and understood in Arabic alphabets? There is no certain answer to this question. The sign sequences of the Indus script are uniform throughout the area of the Indus Civilization and during its entire duration, thus indicating the use of just one language in the script or a script that could be used for several regional languages. The internal consistencies of sign placement and combination suggest that it may be one language, but there are exceptions to these patterns that could be interpreted as more than one languages. In view of the historic distribution of languages in Pakistan, though, it is highly unlikely that only one language was being spoken over the vast region of the Indus Civilization. Since an assumption of two or more languages, possibly from entirely different language families, would vastly complicate the research methodologies, the scholars who are attempting to bring order to this body of data, have proceeded on the assumption that the Indus script renders one language, or several regional

towards a Prehistory of Languages, and Southworth's *Linguistic archaeology of South Asia,* which provided an ongoing impetus towards this debate.

As physical anthropology cannot define races, neither can pure languages be defined. The process of language change and mixing is complex, as variants enter a pool in which selection takes place for a variety of social and cultural reasons (4). Variants from different speakers are pooled, recombined and selected for transmission to subsequent generations. In cases of general cultural homogeneity, without significant migration, the variants are all similar, thus most language lineages have traditionally remained stable through time, but in some contexts speakers of diverse origins may influence each other and thus transmit to future generations a mixed linguistic heritage.

Urdu

Punjabi
Sindhi



Kashmiri Siraiki/Hindko

Baluchi Torwali
Shina
Pashto

forms of one family of languages, into written form. This is not a proven fact and could be a potential source of error in readings which have been attempted so far.

Indus Languages Real and Inferred: Historical linguistics is doubtless a reflection of past population movements and interactions, as are genetics. Much recent research on integrating linguistics with archaeology (and genetics) has happened in the past three decades since the publication of Renfrew's (1987) *Archaeology and Language,* followed by *At the Edge Knowability:*

So far, almost all the attempts at decipherment have been characterized into two main groups. Those who favor a Dravidian language (5,6,7,8,9) and those who favor an Indo-European one (10,11, 12,13), notwithstanding earlier attempts to ascribe the script to a Sumerian language or some newer attempts to an Akkadian language (14). It is also interesting to note that the selection of either of these two language families has been debated since the 1930s with Langdon attributing an IndoAryan language (1931) and Marshall a Dravidian one (1931) in the same volume. Respective decipherers have marshalled linguistic and archaeological evidence to support such claims with varying success.

The linguistic evidence relies heavily upon two elements of data, first, the present distribution of these two

language families in South Asia, and second, a number of the typological characteristics of the Indus script. It is clear from most linguistic maps of South Asia that the northern and western parts of the subcontinent are dominated by a very broad sweep of IndoEuropean languages and the Dravidian

languages are concentrated in the peninsula proper. That this overall distribution is a direct result of the influx of Indo-European languages forcing Dravidian languages into the peninsula and confining Brohi to an isolated pocket in central Baluchistan is accepted by most scholars (5,9,15). Indeed, many scholars would also accept Stein's (1931) and Marshall's (1924) premise that Brohi actually represented a fossil group of the Harappan Civilization itself, as Parpola states: “The conclusion that the Brahui represent remnants of the language spoken by the descendants of the Early Harappan populations of Baluchistan is supported by the evidence” (9). It has also been argued by a number of scholars that the Indus script has some typological features, which are found in Dravidian languages but not within IndoEuropean ones (6,7,8,9), thus strengthening the case for a Dravidian reading of the Indus script.

The Dravidian connection to the Indus language has been criticized by other scholars who insist that the language of the Indus people was related to Indo-Iranian family of languages, especially Vedic Sanskrit. Like the pro-Dravidian scholars, they also draw their argument from the present geographical distribution of languages in the region. They pint out that most of the Dravidian languages are found in peninsular India and northern Sri Lanka, the areas that were never part of the Indus culture. On the other hand, the entire Harappan areas are populated by languages who stem from the Indo-European family of languages. All the languages presently spoken in Pakistan belong to Indo-Iranian languages, to which the Indo-Aryan is a subgroup and Indo-Iranian itself a subgroup of the larger group of Indo-European.

All historical linguists accept that substrate languages have left their mark on now dominant languages, implying considerable periods of interaction amongst different language speakers and bilingualism. The best way to explore this linguistic interaction is, by definition, to investigate the oldest text of the region next to the Indus inscriptions, but strangely enough, it has not yet been used to study the Indus language. This is the RgVeda, which was by and large composed in an area that overlaps with that of the Indus Civilization - the Pashtun Country and the Punjab. The RgVeda is a lively testimony of the poetry, religion, society and the language(s) of the northern half of the Indus area during the immediate postHarappan period, in the second millennium BC. Michael Witzel (2,3) has initiated such a work and he has introduced a group of languages which have not been seriously considered in previous studies. These are what Witzel calls para-Munda, the Meluhha Language of Southern Pakistan, a Language X, and some dialects which may be related to the languages of extreme north of the country, namely the Dardic languages.

Along with the efforts for identification of the Harappan languages, there has been an extensive and ongoing discussion of the spread of the porto-Dravidian language in southern Pakistan and that of some Indo-Iranian language or languages in northern parts of the country. To begin with, the Elamites (the inhabitants of southwestern Iran) had developed a script closer to the Sumerian by the later half of the fourth millennium BC. The language found in the Elamite inscriptions of the third millennium BC is connected with the Dravidian languages. According to McAlpin, the Brohi language also derives from this language and belong to the northern Dravidian family. He throws light on the pastoral vocabulary of the Proto-Elamite Dravidian language and shows that with the progress of the Dravidians into the Indus Valley, this vocabulary underwent modification.

The Elamo-Dravidian Hypothesis rests on the claim that agriculture spread from the Near East to the Indus Valley region via Elam. This would suggest that agriculturalists brought a new language as well as farming from Elam to the Lower Indus Valley. Supporting ethno-botanical data include the Near

Eastern origin and name of wheat. Later evidence of extensive trade between Elam and the Indus Valley Civilization suggests ongoing links between the two regions.



Kalash girls from Nuristan, around Chitral, the speakers of a Dardic language that is thought to be early IndoAryan

The spread of Indo-Aryan language(s) in the Indus Valley is generally based upon two assumptions: first, the Indo-Aryan language, particularly the language of the Vedic tribes, was introduced to the upper Indus Valley by some western pastoralists who composed the Vedas and who came to be known in history as the 'Aryans'. The time line for such an introduction was in Late- or post-Harappan periods. Second, the languages arrived the northern Indus Valley through a diffusion of a new population (16). Both of these assumptions have recently been challenged.

First, there have been a number of suggestions, although not universally subscribed to, that there was a Neolithic, as opposed to a postHarappan Chalcolithic diffusion of porto-ElamiteDravidian as well as Indo-European languages (17), and that the Vedic people were in fact intruding in an area where the inhabitants already spoke a related language that belonged to the same language family to which their own language (The Vedic Indo-Iranian) belonged. Still the notion of the introduction of Indo-Aryan language to the post-Harappan people of northern Pakistan coinciding with the arrival of the Vedic people persist and intense efforts are being expended to archaeologically prove their existence in the Pashtun Country and Punjab as though if the arrival of these new people is proven, the change of culture, along with the language, will automatically be proven.

Second, as Sherratt (23,24) has proposed that linguistic replacement could as well occur through a prolonged trade and cultural contact. This model suggests that trade and exchange could have created new demands for interregional communication, especially between elites. These would have provided circumstances for the formation of pidgins and Creoles, which because of their association with prestige activities could have slowly gained much wider currency in preliterate communities. The role of nomadic pastoralists, going back and forth between settled agricultural communities cannot also be minimized.

The process of language change is a complex subject; linguistic patterns may combine and

recombine by complex social and cultural processes. Languages, of course, may diverge as a product of social mechanisms and geographic distances, indicating how problems may arise for the linguist in recording and comparing various aspects of the languages under study. These complexities are difficult to overcome but efforts are still being made. For example, McMahon and McMahon (28) have recently illustrated how quantitative methods and network programming can help to sort out this situation.

While it is undoubtedly true that languages are carried with the movement of speakers, the number of speakers vis-a-vis preexisting populations is a matter that is more difficult to infer. In order to get at this we need to try to frame periods of language interaction in time and space so that we can consider the likely historical and social circumstances that were involved. Our improving grasp of early agricultural traditions in ancient Pakistan and the biogeography of their cultivars as well as wild flora, means that there is a basis for assessing linguistic data. Of note are efforts to identify substrata that have influenced IndoIranian and Indo-Aryan languages at different periods and a relative chronology of these substrates (29,30,31,32,33). One clear indication of this work is that we need to break free of the present as a complete key to the past: there were languages spoken in the past that are not reflected directly in those known at present. There are dead language families. But these have nevertheless left their mark through loanwords and other substrate features. Michael Witzel has done extensive work on this aspect of the debate and we shall come to him in a short while.

The Neolithic Dispersal of Languages: The dispersal of languages, particularly those belonging to the Indo-Aryan family of languages, has been a hot topic of research in Europe for some time where the Early Farming Dispersal Hypothesis of Bellwood and Renfrew (17,34) has been quite a popular theme. It postulates that the spread of early farming lifestyle were often correlated with prehistoric episodes of human population and language dispersal from agricultural homelands (35). Accordingly, the most widely spread language families today came to be distributed at the expense of those that were primarily hunters and gatherers. It fueled the initial human colonization of the whole world, apart from a number of oceanic islands. The present-day distributions of language families and racially varied population across the globe, allowing for the known reassortments that have ensued in historical times, still reflect to a high degree those early dispersals. The origin of Indo-European languages, the porto-language from which a number of languages in Europe and Asia derived, is variously speculated in Anatolia, Central Asia, and Eastern Europe, especially the Ural region, from where this language family dispersed over a large area, including the Indus Valley and further on in northern India. The controversial point is the mechanism and timing of dispersal.

Bellwood bases his hypothesis on two primary observations in history: 1) Prior to the era of European colonization there existed (and still exist) a number of very widespread families of languages, the term ‘family’ in this sense meaning that that the languages concerned share common ancestry, having diverged from a common forebear. These language families exist because they have spread in some way from homeland regions, not because they have converged in place out of hundreds of formerly unrelated languages. 2) Within the early agricultural past of mankind there have existed many widespread archaeological complexes of closely linked artifactual style, shared economic basis, and relatively short-lived temporal placement. In the archaeological literature these complexes are generally referred to as Neolithic. Again, these spreads have occurred from homeland regions, and most such complexes tend to become younger as one moves away from regions of agricultural origin. Most importantly, many agricultural homelands overlap geographically with major language family homelands, in highly significant ways.

The hypothesis of Neolithic dispersal of languages remained in fashion for a number of years and is still uncritically repeated by many archaeologists and prehistorians. This broadbrush generalization is however, being challenged on various grounds. The theory may have some tangential relevance to the spread of IndoEuropean languages along with the spread of agriculture in Europe, and the spread of a language or two in Africa, but it has little support from elsewhere. In South Asia, especially, there is neither archaeological nor etymological data to support the hypothesis of a prehistoric movement of some 'seed bearing' farmers from the West to the East, bringing with them the Indo-Aryan languages. It seems that neither is there any evidence for the so-called Elamo-Dravdian Neolithic expansion from Iran to the Indus Valley. Modren studies in population genetics amply bear witness to the fact that while an expansion of introduction of agriculture to Europe may well be attributable to the migration of some farming populations from the Near East, it cannot be said for the situation in the Greater Indus Region where the beginning of agriculture was mainly an indigenous affair or at best a result of Middle Asian interaction zone.

This hypothesis has bearing on one of the most contentious and long-term research problems in South Asian prehistory, i.e., the origin and spread of Indus languages, including PortoElamite-Dravidian as well as Indo-Aryan languages. According to Renfrew, these languages were imported into Pakistan by farming or pastoral communities from the West (17,36). Though genes and languages have been correlated with demographic expansions of farming populations and migrations towards South Asia (37), recent studies of mitochondria DNA argue against a strong differentiation of peoples speaking IndoAryan and porto-Dravidian languages (38) and no support for the entry of 'Aryan" populations or earlier Porto-Elamote-Dravidian speaking people is found in physical anthropological data.

Colin Renfrew's book *Archaeology and Language - the puzzle of Indo-European origins* (17) was a bold attempt to rationalize the debate on the spread of languages, especially that of Indo-European languages but some formidable methodological and empirical obstacles stood against such a hypothesis; Kristian Kristiansen discuss them in details in his essay *What language did Neolithic pots speak?;* Colin Renfrew's *European farming-language-dispersal model challenged*, published in 2005 (39). Kristiansen demonstrated the existence of international networks connecting Bronze Age societies throughout Eurasia and the Aegean during the early second millennium BC, and this can account for the widespread appearance of Proto-Indo-European institutions and their material culture. They include the institution of warrior chiefs and two wheeled chariots and the institution of the Divine Twins. In addition, contemporary or near contemporary texts verify these interpretations. Kristiansen has further given a historical explanation for the occurrence of similar Proto-Indo-European institutions all the way from Pakistan to Scandinavia. The proposal is that the language appeared at the same time, an idea that would seem to be in accordance with John Robbs model for a social prehistory of European languages (40).

Dravidian Connection: Sir John Marshall thought that the language of the Indus script most likely belonged to the Dravidian family, which, he thought, is still represented in Baluchistan by Brohi language. Piero Meriggi, an acknowledged authority of the Hittite and Proto-Elamite scripts, agreed with Marshall about the linguistic affinity in his paper on the Indus script, but refrained from a phonetic decipherment and tried to understand the signs from their pictorial forms. The Dravidian hypothesis was also the basis of Father Henry Heras's ambitious attempt, which culminated in a large book (5) published in 1953. Iravatham Mahadevan, Indus script pioneer of India, has devoted 30 years of his life to the study of the Indus script. He is known for his decipherment of the Tamil Brahmi

script, which is the earliest deciphered script from the Tamil caves in Southern India. Mahadevan concurs with Marshall, Father Heras, and others before him that the language of the Indus Valley was probably of Dravidian origin (41). Mathivanan believes that the Indus language was not only Dravidian, it was related to Tamil. This specificity is probably derived from several words and other similarities between Tamil and the language of Sumer. Since the latter was contemporary with the Indus and since a possibility of connection between the two existed, the probability of the remnants of the Indus language in Tamil is indicated.

Generally recognized as the world's expert on the Indus script, Asko Parpola has been studying Indus writing for over 30 years at the University of Helsinki in Finland. He is coeditor of collections of all Indus seals and inscriptions found in Pakistan and India. A grand summary of Parpola's work, *Deciphering the Indus Script* was published by Cambridge University Press in 1994 and later released in an updated version in 2009 (42). Asko Parpola suggests that the original Indus language was closely related to the North Dravidian languages represented today by the Brohi language of Bluchistan and Afghanistan. This fundamental concept is also the basis for decipherment of the lndus script favored by the scholars of the Soviet Academy of Sciences.

The Dravidian languages consist of a family of about 23 languages that seems to be unrelated to any other known languages. These languages are now spoken by over 200 million people in south and central India as well as in Northern Sri Lanka. Dravidian languages have some distinct characteristics such as the formation of a large number of sounds in the front of the mouth. The verbs have both a negative and affirmative voice, and gender classification is made on the basis of rank rather than sex, with one class including beings of a higher status and the other beings of a lower status that includes inanimate objects. Another distinctive feature is that there is a great use of suffixes but not prefixes to the nouns and verbs. Modern Dravidian languages have their own alphabets that can be traced back to a common source related to the Devanagari alphabet used for Sanskrit.

Modern Dravidian languages are generally considered to be the offshoot of a more archaic parent language, proto-Dravidian, which was possibly spoken throughout the southern region of the Indus Valley Civilization from the middle of the third millennium to the beginning of the second millennium B.C. This language was most likely related to the porto-Elamite language that was ostensibly spoken over a large area of southern Iran. Thus, one speaks of a porto-ElamiteDravidian language family from which the present-day Dravidian languages arose and it is It is hypothesized that the Harappan language, especially in the South, may be part of this family.

The porto-Elamo-Dravidian language family is a hypothesized language family that links the Dravidian languages to the extinct Elamite language of ancient Elam (present-day southwestern Iran). Linguist David McAlpin has been a chief proponent of the porto-Elamo-Dravidian hypothesis. McAlpin (43,44,45,46) in his study identified some similarities between Elamite and Dravidian. He proposed that 20% of Dravidian and Elamite vocabulary are cognates while 12% are probable cognates. He further proposed that Elamite and Dravidian possess similar second-person pronouns and parallel case endings. They have identical derivatives, abstract nouns, and the same verb stem marker plus personal ending structure. Both have two positive tenses, a "past" and a "non-past".

Apart from the linguistic similarities, the Elamo-Dravidian Hypothesis rests on the claim that agriculture spread from the Near East to the Indus Valley region via Elam. This would suggest that agriculturalists brought a new language as well as farming from Elam. Supporting ethnobotanical

data include the Near Eastern origin and name of wheat. Later evidence of extensive trade between Elam and the Indus Valley Civilization suggests ongoing links between the two regions. It is also believed that since Brohi, which is considered by some a Dravidian language, is still spoken in the area (e.g. In Kalat, Baluchistan), chances are good that the ancestors of the Brohis were also living there at the time of the Indus Civilization.

Fairservis (8,47) and Zvelebil (48) think that the migration of Elamo-Dravidian speaking tribes happened during *ca*. 4000/3500 BC, from the mountainous lands of East Iran and Baluchistan into the Indus Valley. Both underline data that characterize the Dravida as originally pastoral hill tribes. They moved along to the East after a period of acculturation with the Indus people, who practiced intensive rice and millet cultivation in Sindh (49,50,51). Several passages in book 8 of the RgVeda indeed seem to point to the earliest references to rice in the Vedic texts. It is precisely here, at Pirak, that the newly introduced rice was first found towards the end of the Indus civilization (50). This kind of scanty evidence suggests that we may have to reckon in the southern Indus area with a similar, maybe even more complicated combination of factors, than in the Punjab.

It is indeed possible that the Dravidan constituted a first wave of central Asian tribes that came to Iran before the Indo-Aryans, just as the Kassites entered Mesopotamia before the Mitanni Indo-Aryans. The Dravida knew the horse already in Central Asia, as indicated its non-Indo-Aryan word in Brohi *(h)ullī*, Old Tamil *ivuli* 'horse', etc., different from Indo-Iranian *asva*. The early introduction of horse and camel from the Iranian plateau into Sindh (Pirak and Kachi plain in western Sindh), may have been due to the Dravidian speakers. But they apparently did not preserve a word for 'camel'.

Traces of Dravidian words are still found in the southern Indus Valley in the form of river names and many Dravidian loan words are found in ancient Sanskrit, the Indo-Aryan language of the RgVeda. Numerous structural borrowings from Dravidian have been identified in Sanskrit texts composed at the end of the second and first half of the first millennium BC, before any intensive contact between north and south India is detected. This indicates the presence of Dravidian languages in the Indus Valley in the pre-Vedic times. Based on this hypothesis, Parpola recommends deciphering the Indus script with the help of the current Dravidian base, a line of enquiry followed by Father Heras a long time ago and, as indicated above, by I.Mahadevan in more recent times. In essence, therefore, these linguists, and several others, support the hypothesis that the Harappan language indeed belonged to the Dravidian family.

That the Proto-Dravidian language originated in the Elamite area and spread from there via southern Pakistan to western India and eventually to South India is broadly accepted by many scholars. In the West. The hypothesis is, however, questioned on the basis that Dravidian words are found in the RgVeda, but so far they have not been reported from the Avesta. This argument is countered by the proponent of the Dravidian hypothesis by drawing attention to the fact that the Avesta was not composed in southern Iran. Moreover, all the fragments of the Avesta have not been recovered so far. Georgiy Starostin (52) *al*so criticized McAlpin's proposed morphological correspondences between Elamite and Dravidian as no closer than correspondences with other nearby language families.

There is an array of other studies that negate the above-sketched Dravidian connection. For example, Witzel’s studies of RgVedic substrate, discussed below, conclude that there are no traces of Dravidian language in the RgVeda until *ca.* 1500 BC, not even of the supposedly ‘Dravidian speaking’ traders and rulers of the Indus Civilization. To augment his position, Witzel points out that many words that

have been regarded as Dravidian are now explained as coming from Munda or another substrate language.

While Dravidian loan words are absent in the early parts of the RgVeda, they suddenly appear in the RgVedic texts of later levels. These include personal and tribal names, as well as cultural terms. These results clearly show that the Indo-Aryans did not at once come in contact with speakers of Dravidian languages but only much later. Conversely, it shows that when the Vedic people entered the northern parts of the Greater Indus Valley, there were apparently no Dravidian speaking peoples living here. It is easy to see that if the Indus people spoke a Dravidian language, we were bound to notice at least some substrate of Dravidian origin in the early parts of the RgVeda. This conclusion totally negates the notion that the Harappan language was Dravidian, at least not in the area of the Punjab, the Pothwar Plateau, and the Pashtun country. Apparently, Dravidian speakers began influencing the Punjab only at a later time (53).

There are still other scholars who do not find any Dravidian substratum in the RgVeda, taking issue with the old belief that numerous Dravidian words are indeed found in the Rig-Veda. They point to the fact that there is no consensus among linguists on this point. The Rig-Veda has 500 Dravidian loanwords according to T. Burrow; the figure comes down to 380 according to F. Kuiper, to 100 according to M. Witzel, and to just one according to M. Emeneau. Then, the substratum language is proto-Dravidian according to Burrow or Southworth, but para-Munda according to Witzel, who tried to show that Dravidian loanwords in the Rig-Veda are found only in the more recent Mandalas and are therefore irrelevant (54). Other linguists reject all proposed Dravidian loanwords: this is the case with P. Thieme and H. H. Hock. (55). Murray B. Emeneau, the late Dravidian linguist, hoped that linguists could agree on at least one loanword, *mayura*, as being Dravidian; he wrote: "Vocabulary loans from Dravidian into IndoAryan] are in fact all merely 'suggestions.' Unfortunately, all areal etymologies are in the last analysis unprovable, are 'acts of faith'...." (56). Clearly, the Dravidian sub-stratum in Vedic language is an elusive one.

There is also a subtler point here: assuming there might be a few words with Dravidian roots in the RgVeda, how do we know that they were "borrowed" by Aryan immigrants? Loanwords, if any, need not be relics of a substratum; in the absence of a well-defined pattern, they could just as well be the result of long-standing exchanges between the "post-Harappan language", with which the Vedic people came in contact and the Dravidianspeaking people to their east or the south?

One linguistic argument is nearly fatal to the Dravido- Harappan thesis. It comes from hydronymy: the names of all the rivers of Pakistan are not Dravidian but Indo-Aryan. It is inconceivable that a Dravidian-speaking population could have lived there before the so-called Aryans - if they had, at least a few river names would betray their Dravidian origin. Such a complete erasure of earlier names would be unprecedented: in Europe, many pre-Roman river names have subsisted, just as in America pre-colonial river names remain common. River names are among the most conservative linguistic features, and what the Pakistan's hydronymy is plainly telling us is that Indo-Aryan was spoken there much before the arrival of the Vedic Aryans.

The presence of Dravidian speakers in the Harappan realm is still open. The linguists have not yet decided whether they in fact originally were pastoral people from the mountainous areas of Greater Iran (48); others (57) would have them inside South Asia at a very early date. In deciding this question, the agricultural loan word links of Dravidian with Sumerian will be of importance; there

also are some vague similarities with Caucasian languages in some loans words such as 'horse' and 'wheat'. Such factors may indeed point to a western, Iranian location of Dravidian before immigration into South Asia. McAlpin (45), however, thinks that the porto-Dravidians participated in the Indus Civilization, from which they acquired agriculture and the accompanying vocabulary. One thing is clear, though: Dravidian and IndoAryan words for domesticated animals are quite different from each other (2).

Then there is the case of Brohi, a presumed Dravidian language still spoken in parts of Baluchistan. Presently, the Brohi-speaking people in Baluchistan and eastern Afghanistan are reportedly numbered to about two million in total, they are mainly concentrated in Kalat and have been traditionally pastoralists. The Brohi language has for long been related to Dravidian stem of languages and its presence in this part of the Greater Indus Valley has been traditionally realized as stemming from antiquity, a remnant of the Hardpans, a factoid that has often been brandished as the ultimate proof of a Dravidian presence in the Indus region. But in the 1920s, French linguist Jules Bloch demonstrated, through an analysis of the Brohi vocabulary, that the language reached Baluchistan recently, perhaps at the time of the Islamic invasions and probably from central India (58). This thesis was later endorsed by Murray Enema (59), and still later by H. H. Hock (60). Finally, the linguist and mathematician Josef Elfenbein confirmed it using a different approach (61). According to the French IndoEuropeanist Bernard Sergent, “the conclusion is radical … Brahui reached Baluchistan late, and can therefore no longer provide proof or even a clue of the Dravidian-speaking character of the people who lived along the Indus (62). It seems now to be increasingly accepted that the ancestral Brohi, found today in Baluchistan, migrated within the past millennium from a North Dravidian area in central India (30,33,61) but for a dissenting view see Parpola, (9).

As noted by Witzel, there is a lack of older loanwords in this language from Iranian languages such as Avestan or Pashto, but only from modern Baluchi. In addition, it was the latter position, which implied an early divergence of Brohi, that has long been taken to support to dispersal of the early Dravidian speakers from southern Pakistant, perhaps to be connected with a shared ancestral relationship to the ancient Elamite speakers of Iran (36,46,63). As is argued by Fuller, the evidence of lexical reconstructions relating to flora, as well as place names, modern language geography and archaeological correlations all point to Porto Dravidian located on the peninsula, and thus Brahui must be accounted for by a migration from the Peninsular region (possibly including Saurashtra or parts of Rajasthan) towards Iran. Brohi might be a direct legacy of the Indus Valley Civilization but most likely it may have arisen through Aryan and Dravidian assimilation during the later phases of the Vedic period in Pakistan.

There are some scholars who deny the Dravidian character of the Brohi language altogether. According to these opinions, the Dravidian substrate in the Brohi language is too thin to qualify it to be a Dravidian language and that in all probability it is an Indo-Iranian language with some content of proto-Dravidian. The Brohi themselves claim that they are comparatively recent immigrants to Baluchistan, probably half a millennium years ago, most probably originating in Siestan or Iranian Kurdistan. As stated earlier, there are also opinions (61) which proclaim that the Brohi tribes were in fact recent migrants from the East, probably from western Gujarat, where some remnants of Dravidian languages still prevailed.

Sanskrit-Based Languages: The Dravidian connection to the Indus language has been criticized by other scholars who insist that the language of the Indus people was related to IndoIranian family of

languages. Like the proDravidian scholars, they also draw their argument from the present geographical distribution of Dravidian languages in the region. As stated above, over twenty-five Dravidian languages are presently spoken in India, including Tamil, Telegu, Kannada and Malayalam. Most of these languages fall in the categories of central and southern Dravidian and are found in peninsular India and northern Sri Lanka, the areas that were never part of the Indus culture. Similarly, there is an obvious disconnect of the Indus Valley from the Munda speaking region in India. These scholars argue for an Indo-Aryan language as the majority language of the Harappans.

Although the Farming/Language Dispersal Hypothesis has been the currency for some time, most world scholars still believe that it were the Vedic people (the so-called Aryans) who brought the Indo-Aryan language with them and that they came later than the time of the Indus Civilization. This would rule out Aryan influence on the early language of the Indus people and speak for some non-Aryan language in the Indus Valley during the Harappan Civilization. There are, however, some voices who proclaim that languages of Indo-Aryan family already existed in the Indus Valley when the Vedic people intruded into the Pashtun country and Punjab. Renfrew (17), for example, argues that a Neolithic demic diffusion brought IndoAryan languages to the Indus Valley.

The key assumption shared by those favoring Indo-European linguistic model is that archaeological evidence of the presence of foreign or rather newly arrived peoples may be found in the finds of objects with 'foreign-traits'. The similarities between an antennae-hilted copper sword from Bactria in Afghanistan and a similar example from Uttar Pradesh in India are thought to suggest that the RgVedic “Dasas" of the Indus Valley may have introduced some artifact types found in the Copper Hoards of the upper Ganges Valley' (9), a point supported by Allchin (18). Similarly, Falk has suggested that it is possible to draw further analogies between certain objects within the 'Copper Hoard Culture' and objects described within the *Rigveda* (19) and Mallory identified the Gandhara Grave complex and Painted Grey Ware as further Indo-European indicators (85). The Megalithic sites of Peninsular India are also interpreted as the result of a further diffusion of people. All this evidence suggests the introduction of the Megalithic culture into India by horse-riding and warring nomads, probably speaking an Aryan language' (9) - a view also shared by others (18). These interpretations suggest the simple equation that 'material culture = people = language' and are rather reminiscent of some of Childe's culture historical frameworks (20). Processual and postprocessual developments in archaeological theory have surely enabled us to abandon such crude equations and to acknowledge that the dynamics of material culture, ethnicity and language are far more complex. Indeed, even Parpola concedes that 'the correspondence between language and culture is not always one to one' (9). Objects do not necessarily need to be carried by a single group from one location to another, objects are traded and if one imagines a down the line exchange one can observe an object traveling hundreds of miles whilst its human carriers themselves only travel tens of miles. As a number of scholars have demonstrated the continuity between the Harappan and the Early Historic periods (see Section V), an alternative interpretation of these objects would be therefore that a transformation of Harappan systems of sociopolitical integration led to the introduction of new systems of integration. In such a scenario it seems likely that the arrival of these new systems would be accompanied by the arrival of new prestige objects and concepts. The population would thus remain by and large stationary whilst objects of prestige, being the currency of competition, would change.

Almost all the proponents of Sanskrit-based Indus language are from India and almost all of them seem to subscribe to the Hindutva political agenda. In view of their missionary zeal, one is constrained to give this proposition little weight although some of the arguments, if presented

scientifically and dispassionately, could surely hold water. Few western scholars seem to subscribe to this notion. For instance, in his brief review of the earlier attempts at decipherment of the Indus script, Parpola leaves no one in doubt about what he thinks of this Indo-Aryan-based approach. "Nationalistic bias makes it difficult for some North Indians to admit even the possibility of the Indus Civilization being pre-Aryan; they deny the very concept of Aryan immigration and insist that the Harappan and Vedic cultures are one and the same. So the language chosen has usually been Sanskrit".

Among the proponents of Sanskrit-based Indus language is a prominent Indian archaeologist of sort, S. R. Rao, who, like so many other Indian scholars, reads the Indus texts in an Aryan language close to Vedic Sanskrit. He produced a decipherment of the Indus script that led this ancient script not only to the later Indian Brahmi script, but also to the early Semitic alphabet, making the Indus writing the mother script of the Middle East (64). This attempt obviously has not-sohidden political agenda which Rao has been known for.

Rao noticed two basic facts about the Indus script “which had not caught the attention of the earlier scholars”. First, he noticed that of the 400 to 500 letters found on the seals, some letters seemed to be basic letters, while most of the other letters seemed to be those same basic letters with some additional signs attached to them. Second, he noticed that the script was, contrary to the general belief, not absolutely uniform over the entire period of the Indus civilization, thereby indicating an evolution. He gathered together all the data on different inscriptions and classified them period-wise. He also separated the basic letters from those with additional signs, and arrived at a small number of basic letters. Then, he decided to examine those scripts and alphabets of the world which were closest in time, to the Indus script, to see whether those scripts or alphabets could give any clue as to the sound-value which could be assigned to these basic letters. It is, however, not stated how Rao determined the evolution of the Indus script and how did he periodize the changing shapes of the Indus signs while everyone else has so far failed to see any chronology in them.

In West Asia, the South Arabic and Old Aramaic alphabets had come into prominence by the beginning of the 1st millennium BC, and the Ahiram Sarcophagus (1300 BC) and Gezer potsherd (1600 BC) provided the earlier stages of these West Asian scripts. Rao found that many of the basic letters of the Indus script bore resemblance to the letters of these two West Asian alphabets. He decided to assign to each Indus basic letter the same sound-value as the West Asian letter which closely resembled it (64). After assigning these values to the Indus letters, he proceeded to read the inscriptions on the Indus seals. Lo and Behold! the language that emerged turned out to be an "Aryan" one. Among the many words yielded by Rao's decipherment are the numerals *aeka*, *tra*, *chatus*, *panta*, *happta/sapta*, *dasa*, and *dvadasa* [1,3,4,5,7,10,100] and more importantly the names of Vedic personalities like *Atri*, *Kasyapa*, *Gara*, *Manu*, *Sara*, *Trita*, *Daksa*, *Druhu*, *Kasu*, etc. Thus, the Indus language was proven not only to be Indo-Aryan but also Vedic. As a bonus, the Indus Civilization instantly becomes a Vedic Civilization.

On a serious note, there is the problem of chronology in the assertion that the Harappan language was Sanskrit-based and the proposition that Brahmi script of India is nothing but a simplified Indus script. The oldest extant inscription of the Indian Brahmi script dates to around 300 BC or so, while the Indus sites excavated dated down to the mid-second millennium BC, leaving a gap of more than a thousand years. This objection has been countered by saying that while the direct connection between the late Indus script (1600 BC) and the Brahmi script (300 BC) could not be definitely established earlier, “more and more inscriptions have been found all over the country in the last few years, dating 1000

BC, 700 BC, and so on, which have bridged the gap between the two. Now it is evident that the Brahmi script evolved directly from the Indus script." (64). One wonders where and in which region "more and more" inscriptions were found dating back to 1000 and 700 BC.

Madhusudan Mishra is another stalwart of Sanskrit-base decipherment. He was a lecturer in Sanskrit in Germany and India before joining the well-known Hindu fundamentalist organization, the SSS, which he served until his retirement. His work on the Indus script *From Indus to Sanskrit* is in three parts (1996-98). The following summary is based on Part III of the book, which presents a revised model of his decipherment of the Indus script. According to Mishra, the language of the Indus inscriptions is Pre-Vedic Sanskrit described by him as the 'grandmother of the Vedic language' as well as the mother of not only Sanskrit and its numerous offshoots, but also of all Dravidian and Austric tongues of India, and for early Iranian as well as European Greek, Latin, Germanic, Slavic et al. in short the mother of all known languages (32).

Mishra also believes that the Indus script evolved through three successive stages, written at first with animal figures, then with geometric forms and finally with numeral signs (we wonder, where did he find the evidence), even though all the three phases are present simultaneously in the extant Indus texts. Mishra's study of the concordance of the Indus texts leads to the conclusion that each Indus sign represents a complete word and that stable pairs and triplets of signs build up phrases or clauses. The ligatured signs represent compound words. The word-signs are strung together loosely in short sentences with very little or no grammar. Mishra accepts the generally held view that the Indus inscriptions are normally written from right to left. His readings yield a list of monosyllabic words in the 'IndusSanskrit' language. A remarkable feature of the list is that each monosyllabic word is provided with a large number of meanings. For example, *ca* has 12 meanings, *ta* has 12, *sha* has 21 and *ha* has 26. In this way, the monosyllables are made to yield hundreds of words in Sanskrit. The choice of any particular meaning depends wholly on the context (or, on what you want to read).

Mishra's model differs from previous bids to "Aryanize" Harappa, but treads the same terrain in spirit. The "primitive" language of the Indus, Mishra infers from evidence provided by the corpus of seals, was developing into the "agglutinative" stage (when compound words crop up) when a mysterious calamity dispersed the population. Blending linguistics with a bit of climatology, Mishra says the branch that went south and east (Dravidian, Munda, etc), "under unfavorable conditions of hot sun and hilly forests", limped along at that early stage, whereas the branch that went west - to the "land of Soma plants", i.e. the Pashtun country in the present-day Pakistan - prospered under salubrious climes and evolved into the third stage of language development, "inflectional" (marked by sophisticated grammar). This group, Mishra writes in his sweeping narrative, returned later to join the original settlers around Sarasvati - and spawned the great culture that gave to us the RigVeda. In a way, the interpretations reclaim the most ancient known Indian culture for the "neo-Aryan" brigade, putting their origin in the Indian heartland (barring a breezy visit to neighboring pastures), and neatly subsumes the Dravidian strain into it without so much as a hiccup.

In the opinion of Mahadevan, of all the Sanskrit-based decipherments, Mishra's comes closest to the structure of the Indus texts as determined by objective formal analysis. He accepts that the direction of writing is from the right, that the script consists mostly of word-signs and not mere phonetic syllables, that the signs form stable combinations of pairs and triplets to build phrases, that ligatured signs are compounds of words and not sounds, and that there is hardly any overt grammar in the inscriptions. In spite of these initial advantages, his decipherment appears to be unsuccessful mainly

for two reasons, one related to the procedure for decipherment followed by him, and the other to his views on the historical and linguistic context of the Indus Civilization. Mishra evidently falters when faced with the problem which has baffled all the would-be decipherers irrespective of the linguistic models chosen by them, namely, the inherent uncertainty in identifying the pictorial and geometric signs.

Along with his emphasis on the “UrSanskrit”, it is relevant to take note of Mishra’s views on the Dravidian languages. According to him these “rustic dialects” belonged to the IndoAryan family. He deplores the reconstruction of Proto-Dravidian on the lines of the reconstruction of Proto-Indo-European. He thinks that utilizing the *Dravidian Etymological Dictionary* to read the Indus texts is ‘abortive’ and nothing can come out of it. And finally, “the Tamil merchants should never have found a place in (the Indus) inscriptions of ethical and philosophical nature”. Mishra’s unbounded love for the Aryan and reverence for the Sanskrit language are matched only by his contempt for the ‘rustic dialects’ of the Dravidian languages and the ‘Tamil merchants’.

This comes close on the heels of the lively controversy generated over a book *The Deciphered Indus Script: Methodology, Readings and Interpretations* (65) by engineer-turned-historian N.S. Rajaram and paleographist N. Jha. Their thesis - which identified Harappan Civilization with early Vedic culture - was hotly contested by western Indologists led by Harvard scholar Michael Witzel. A lot of dust was raised by derisive media write-ups. The decipherment is by Jha and the final version of the book has been written by Rajaram who also acknowledges providing most of the historical background. The Jha-Rajaram model of decipherment of the Indus script is based on what is described as the ‘changed’ historical and linguistic context resulting from the discovery of the Indus Civilization.

In brief, Rajaram’s position is that the earlier theory of the Aryan invasion implying that civilization was first brought to India by bands of nomadic pastoral invaders from the Central Asian steppes around 1500 B.C. has been negated by the discovery of the Harappan Civilization “which flourished between 3100 and 1900 B.C. with its antecedents dating back to about 7000 B.C”. This entire period is identified by Rajaram with the “Vedic culture”. The Indus Civilization is equated with the late Vedic period of the *sutra* literature. The Indus inscriptions are in Sanskrit and consist of sutras with words traceable to the *Nighantu*, the ancient Vedic glossary compiled by Yaska. The problem faced by Rajaram at the outset is that his views on the historical and linguistic context of the Indus-Vedic civilization are not accepted by any scholar of international repute. His visualization of the Indus Civilization is so outlandish that he himself recognizes that he has to demolish the current theories if the model of decipherment presented by him has any chance to be accepted. And he goes about the job of demolition with gusto in his inimitable polemical style. He identifies several ‘powerful’ obstacles which stand in the way of progress towards a correct understanding of the historical and linguistic context as visualized by him. These “powerful barriers to progress” identified by Rajaram are colonial interests and Christian missionaries, historians (especially Marxist), linguists (especially Dravidian), Indologists and archaeologists (especially foreign). When these barriers are removed, progress towards recognizing the identity of Vedic and Indus Civilizations would be unimpeded (66).

Jha’s decipherment, as interpreted by Rajaram, is obtained from the supposed similarity of Brahmi to the Indus script. As Rajaram explains, this is the ‘paleographic basis for Jha’s decipherment’. From the comparative chart of the Indus and Brahmi scripts published in the book, one can make out the actual procedure followed. The ‘plausible transition path’ of each Indus sign to the Brahmi stage is

traced by progressively ‘simplifying’ the sign by cutting and chipping until the desired linear Brahmi form is reached, and its phonetic value is presumed to be that of the corresponding Indus sign. Thus an ‘alphabetic subset’ is created, which forms the basis for Jha’s readings and Rajaram’s interpretations.

Rama Sarkar is another Indian scholar (67). He does not claim to be an original researcher, instead he echoes the decipherment of Rao and advocates the historical views of Rajaram et al. There are probably many others who fall in this category. The Internet is bulging with the writings of these experts who are anxiously drawing attention of the reader to “new” discoveries in the Indus realm and “unbiased” ideas about the historic background of the Indus script. The basic theme is the same: the Vedic Harappans, Sanskrit the mother of all tongues, Aryans the carriers of civilization to the world, India the source of all wisdom, and so on.

Notwithstanding the Hindutva agenda of the proponents of archaic Sanskrit as the language of the Harappans, one must admit that the possibility of Indo-Aryan language(s) as being the Harappan language(s) is real. Just as there is a language gradient today in the Greater Indus Valley - Farsi on the West to decreasing vocabulary towards the East - there could be the same sort of linguistic gradient in the post-Haraoppan time. In this scenario, however, we must disengage the postHarappan language from the RgVedic language. This means that we must not assume, as it is universally done, that it were the Vedic people who introduced the Indo-Aryan language(s) to the Indus Valley. It is very well possible, in fact likely, that the Vedic people were diffusing into a population that spoke different versions of the same language, i.e. an archaic Indo-Aryan language, and thus mutually intelligible. The reading of the RgVedic hymns would show that the Vedic people not only raided the cattle pens of the local peoples but also interacted with them in so many peaceful ways. They communicated with the local population to the extent that their bards were singing the praises of some of the local chiefs (probably those who paid them handsomely) as they did their own. They negotiated with the *Panis*, whom they found rather niggardly. This needs a language that is mutually understandable. Languages do not change suddenly. If a Sanskrit-related language or languages were in place in Late- and post-Harappan times, it is not far-fetched to imagine that the same situation might have been prevailing a few centuries before. Just like other changing languages, this Indo-Aryan language must have substrate words from the previous languages (Munda, Dravidian, and others) from where the Vedic seers picked up the ‘loans’ some of which then appeared in the RgVedic text.

RgVeda as a source of Linguistic Research: Unfortunately, the evidence of the RgVeda is, by and large, limited to the Pashtun country and the Punjab. Sindh and Baluchistan appear only very marginally even in the post-RgVedic texts but there are some indications that Sindh and neighboring Baluchistan were known. The data from Book 8 of the RgVeda may provide some information, although very scanty. Details are very sketchy and cannot be discussed here in detail and results must remain very tentative for the moment. The Book 8 has long been connected with Eastern Iran. It is here that Dravidian place names are assumed to appear first. These names extend from Sindh via Gujarat and Maharashtra to South India. It appears that a large section of the population of Sindh left this area towards the end of the Harappan period. They moved further east, to Gujarat, where we find a late, local phase of the Indus Civilization and Dravidian names (53,68). The southernmost tribe mentioned in the RV are the Bhalånas who took part in the Ten Kings' Battle and are certainly to be located around the Bolån River in northwestern Baluchistan, but this, like all other southern rivers, is not mentioned anywhere in the RgVeda.

The language of the text, Vedic Sanskrit, is a form of Indo-European and probably not "Harappan". The 1028 RgVedic hymns are addressed to the gods and mostly used in ritual. They were orally composed and ostensibly preserved by exact repetition through by rote learning until put to writing some one thousand years later. Vedic Sanskrit is an archaic Indo-European language, belonging to the Indo-Iranian branch (which comprises Indo-Aryan, Iranian, and Nuristani). But some 4% of the words in this sacred text are clearly of non-Indo-European and nonIndo-Aryan origin; in other words, from a pre-IndoAryan substrate. This is remarkable: to apply this to the Near Eastern context, it would mean that an ancient Jerusalem temple ritual would contain Philistine, Lebanese or other "heathen" words (2).

At this stage, a few words about linguistic substrates are in order. Defined here as words from substrate languages are all words in early Vedic that do not conform to Indo-Aryian word structure (including sounds, root structure and word formation) and have no clear Indo-Aryan or Indo-Iranian etymology. The situation is easily understandable, as Witzel explains, when compared to that of English (2). We know that the early form of English, an Old Saxon dialect has overlaid, in the middle of the first millennium AD, the Celtic (and Latin) languages of Britain; both Celtic and Latin have left a number of loan words in Old English as substrate words, such as London (Celtic *Lugdunum* 'town of the god Lug',
-chester (Latin 'fortified settlement'). Later on, English saw the superimposed (superstrate) influences of the Viking language (N. Germanic, with words such as *egg*, place names in *vik*, *-ay*), of Norman French with a large number of loans, an equally huge amount of learned, newly formed Graeco-Latin words, and various influences from the neighboring languages such as Dutch (substrate words such as *dike*, *boss*, etc.). The situation in the Punjab is similar, as will be seen below. A brief, simplified summary looks like this (2):

Many loan words from foreign languages can be easily detected by linguistic means, even if the source of the loan remains unknown, or if it belongs to a long disappeared language. The reason is that all languages follow certain patterns, allow certain sounds or groups of sounds while others are difficult to pronounce, or must be substituted by local ones. A typical example from English is that, until fairly recently, German and Yiddish words beginning with the sound sh- (schnitzel, strudel, to shlep) would have been impossible as English allowed only s-, as in snit, strut, slip). By now, these sounds have been accepted and are pronounced correctly. Similarly, even today words beginning in *ng*, *mf* etc. are not allowed (though now a few African names have been adopted in America, such as *Mfume*). The occurrence of uncharacteristic words therefore indicates a certain cultural influence, even if the native speaker (or a latter day scholar) may not know where these words had come from originally.

In terms of textural evidence, the RgVeda provides us with some of the most ancient sources for the Old Indo-Aryan variety of the IndoIranian branch of the Indo-European language family that are presently spoken in Iran, Afghanistan, Pakistan and a large part of India. However, these texts also contain the oldest available attestation for non-Indo-European words. The Vedas were orally composed, roughly between 1500-500 BC, in parts of present day Afghanistan, Northwestern Pakistan and Punjab. To this day, their oral transmission is believed to be exceptionally good, as is commonly known. It must be pointed out that the RgVeda is a Bronze Age composition of the Greater Indus Valley during the time period that followed the decay and demise of the Harappan Civilization, *ca.* 1900 BC. While the geographical areas of the RgVeda are clearly visible in the mentioning of the major rivers in Afghanistan and the upper Indus Valley, its temporal horizon consists of three stages,

roughly datable between *ca*. 1700-1200 BC:
I. the early RgVedic period: *ca.* 1700-1500 BC II.the middle RgVedic period: *ca.* 1500-1350 BC III. the late RgVedic period; *ca.* 1350-1200 BC

Witzel (2) has shown that the RgVeda contains some 300-350 words, that is roughly 4% of its hieratic vocabulary, that are not Indo-Aryan. It is possible to establish their non-Indo-Aryan character by studying their very structure, for, as stated above, words belonging to a certain language follow well-established patterns. Now, if we look at these substrate words and segregate them on the basis of RgVedic periods, we should be able to observe the pattern of contact of the RgVedic people with those who were already populating the land. Michael Witzel could distinguish the following substrates in the RgVeda:
• A Central Asian substrate in the oldest parts of RgVeda,
• No Dravidian substrate in RgVedic Period I, but that of a prefixing Para-Munda language, along with a few hints of some Language X,
• First influx of Dravidian words in RgVedic Period II and III,
• Continuing influx of the same types of vocabulary into the Vedic speech in the post-RgVedic periods,
• Other substrates include proto-Burushaski (a language group to which Dardic languages of Kashmir and northern Pakistan belong), and
• Predecessors of remnants language groups, now found in isolated pockets of Afghanistan and northern Pakistan.
These findings are interesting as they not only trace the movement of the Vedic people through Afghanistan and Pakistan, but also indicate the possible languages with which they were coming in contact.

Although the Witzel's sifting of the RgVedic hymns for looking for the preexisting languages in the Indus Valley is a bold attempt, opinions differ on the reliability of the *Rigveda* as a documentary, divided between those who view it as a 'literary record' (69) and those who believe it to be largely mythical (70,71,72). Parpola clearly falls in the former category fully accepting the validity of its topographical descriptions (9) and using it almost as a reliable historical document 'Important clues to an archaeological identification of the Vedic invasion are provided by the references to the enemies of the RgVedic Aryans' (9). In doing so such scholars appear to confirm the warnings of the ancient historian, Moses Finley 'We no longer read the *Aeneid* or *King Lear* as true stories ... we certainly do not try to write medieval French history from the "Song of Roland" or medieval German history from the Nibelungenlied.' (73). Moreover, it is possible to interpret the *RgVeda* in the light of Renfrew's System Collapse model (74). This model proposes that the central administration collapses, traditional elites disappear, centralized economies collapse, settlement shifts, population drops and a lower level of sociopolitical integration is reached (74). It also proposes that a romantic Dark Age myth would be developed by new power groups to legitimate themselves, and that later historians would accept such myths as truthful and this would in turn impede the development of Dark Age archaeology. Shaffer has already suggested that such a legitimative myth may have been responsible for the creation of the *Rigveda* (70), thus making it clear that Renfrew's model might fit rather well with the aftermath of the post-urban Harappan transformation!

Austro-Asiatic Connection: The AustroAsiatic languages are a large language family of southeast Asia, and have a distinct distribution across India, Bangladesh and Southeast Asia, separated by regions where other languages are spoken. Munda languages belong to this family of languages.

They are spoken by more than seven million people, all members of tribal groups living mainly in hilly and forested regions of eastern India. Most significant are Santali, with more than four million speakers concentrated in northern Orissa, southern and eastern Bihar, northwestern Bengal, and the Nepal-Assam border; Mundari, with about 850,000 speakers scattered over northeastern India; and Korku, the westernmost Munda language, spoken by about 320,000 in southern Madhya Pradesh and northern Maharashtra. The remaining Munda languages are spoken by small, isolated groups of people and are little known. Munda languages differ from all other Austro-Asiatic languages in complexity of morphology and in having basic subject-objectverb rather than subject-verb-object word order.

Kupier had already suspected the presence of a Munda-related language in the Indus Valley as early as in 1991 when he wrote: " According to some scholars Munda was never spoken west of Orissa, Bihar, Madhya Pradesh and eastern Maharashtra. The obvious occurrence of Old Munda names in the RgVeda points to the conclusion that this statement should be revised." Michael Witzel later refined this argument and based his research on the study of loan words in the RgVeda in relation with time as well as geography. These results were first published in the Electronic Journal of Vedic Studies in 1999 (3) and later consolidated in a paper read in the conference on the Indus civilization, at Madison in 2000 (2). Because of the radical conclusion he draws from these studies and because of the significance of these results in the decipherment attempts of the Indus script, we shall here digress a little and examine the methodology used.

Witzel points out (2,3) that the Munda languages are quite heavy in prefixes while prefixes are not known in the RgVedic linguistic constructions. Prefixes are typical neither for Dravidian nor for Burushaski or Tibeto-Burmese languages. The prefixes of the RgVeda substrate are close to, and in part even identical with those of Proto-Munda, which Witzel calls *Para-Munda*. This clearly indicates the presence of the ParaMunda speaking people in the RgVedic area of influence and these people may as well be the descendants of the Harappan people in the Indus Valley. Additionally, and probably more importantly, is the finding that the para-Munda substrate is the strongest in the early sections of the RgVeda and the weakest in the later parts. Conversely, the Dravidian substrate is the weakest in the early parts and the strongest in the later parts. This obviously means that the Vedic people first came in contact with the para-Munda speaking people and later with the proto-Dravidian speaking folks.

If the predominance of para-Munda substrate over the Dravidian is admitted in the RgVeda, it means that the language of the preRgVedic Indus Civilization, at least in the upper Indus Valley, was of (Para-) Austro-Asiatic nature and not of a Dravidian language, as has been generally believed so far. This is, however, not admitted so freely. Most advocates of the Dravidian language hypothesis evaluate the possibility of an earlier presence of Indo-European languages within South Asia, but summarily dismiss the question of Austro-Asiatic and Sino-Tibetan language families (9). However, both Bellwood and Higham have argued for a Neolithic demic diffusion from China into eastern and northern India as reflected in contemporary linguistic patterns (75,76). Parpola has dismissed the suitability of Austro-Asiatic as a candidate for the language of the Indus script as he states that it probably extended no further than the GangaYamuna Doab (9). He also postulates a link between the northern Neolithic with Sino-Tibetan languages (9), suggesting that this language group was spoken across the entire northern edge of the Harappan Civilization from Kashmir in the East to Swat in the West. Acknowledging contact between this group and the Harappan world, it is dismissed as a possibility in favor of a small pocket of Dravidian speakers who may have moved into the Indus system in mediaeval times!

R.S.Sharma (76) links the arrival of the Munda-speaking people in the Harappan region with the spread of the people who used Copper Hoards and possibly with those who used ochrecolored pottery. The copper hoards are roughly placed between 2600 and 1100 BC. More than forty Copper Hoards have been found, spread over all the way from Quetta to West Bengal and Orissa. Nearly half of the copper hoard sites lie in the Ganga-Yamuna doab, particularly in its upper portion. Thus there is no doubt that copper hoards must also appear in the Harappan zone.

It has been shown by Parpola that the swords and the dirks with antenna hilts from the copper-hoards of the Ganga plains have exact parallels in north Afghanistan. Bar celts from north Afghanistan are similar to the bar celts characteristic of the copper hoards. All these similarities between the copper objects of the subcontinent and those of north Afganistan suggest Munda influence in all that area. Because of this vast expanse of Austro-Asiatic influence, Munda words may have penetrated RgVeda in second millennium BC in Afghanistan also. The fact that these words are found in the early parts of the RgVeda indicates that the Vedic seers may have acquired this Munda vocabulary in Afghanistan and the Pashtun country even before they came in contact with the post-Harappan people in the Indus Valley.

From where did these copper hoard people move to different parts of the subcontinent, including the Harappan area? According to D.P. Agarwal, on the basis of the available limited trace impurity data on metal and artifacts one can probably correlate the copper hoards with Rakha mines in Singhbhum, which lies on the borders of Jharkand, Orissa and Bengal. The Mundari people and their language dominate this area till today. A recent study of the origins of the people and culture of Bengal, as quoted by Annapurna Chatopadhyaya (77) shows that its main ethnic groups such as the Vangas, Pundras, etc. were originally Austroloids and spoke Austro-Asiatic languages in the beginning. The copper hoard people seem to have moved from this area. Since the thickly forested east and mid-Gangetic plains were difficult to cross, they seem to have followed hilly and plateau routes near the rivers through Bihar, Uttar Pradesh, Madhya Pradesh and the upper doab to reach the upper Indus Valley, precisely the same route through which we observe the subsequent expansion of the “Aryans” and the “Aryanized” Indus people in the reverse direction. This may explain the presence of the Munda speakers in the Harappan area around 2500 BC and account for a substratum of para-Munda words in RgVeda sometimes later.

More light on the problem of the Munda presence in the Pashtun country and Punjab can be thrown by a detailed study of the Hindko and Punjabi words. Even an elementary study shows that *kuri* the term used for girl in Punjabi is the same as *kuri* for girl in Santhali, a Munda language. Similarly, the term *munda* for boy in Punjabi is a Mundari word.

Extinct Languages: Para-Munda is not the only substrate in the early parts of the RgVeda: one or more additional but unknown languages cannot be excluded. From the older RgVeda onwards, we find a number of words that cannot be determined as Para-Munda. Some of them can be traced as being loan words from more distant Austro-Asiatic languages. Some substrates can also be related to Burushaski and other non-IndoAryan and non-Munda as well as non-Dravidian languages. In short, the Indus Valley was probably an area of largely Para-Munda substrate that apparently overlays a still older level which may be identical with some unknown language as well as the known languages of the North. Since no traces of the supposedly Dravidian “Trader’s Languages” of the Indus Civilization are visible in the RgVeda, the people who spoke this language must either have disappeared without a trace or, more likely, the language of the northern Indus Valley was Para-

Munda already during the Harappan period.

The occurrence of non-Dravidian names of ‘foreign’ origins in the early levels of the RgVeda, such as the names of the tributaries of the Indus (*Suturdi, Vipas, Vaisambhalya, Krumu, Kubha*, etc), names of some geographical areas (*Gandhari, Kamboja, Sambara, Turghna*, for examples) and those of peoples (e.g., *Kikata*, people living south of Kurukstra) further strengthens this proposition. This is a radical conclusion as it flies in the face of so many reputable attempts in the deciphering of the Indus script. This also means that all proposals for a decipherment of the Indus script must start with the *ca.* 300 Austro-Asiatic words in the RgVeda instead of assuming the Harappans as the speakers of Dravidian or IndoAryan languages.

Some scholars (78) have raised the question whether the Indus inscriptions are written in (an) unknown language(s). A good candidate could be Masica's "Language X" that is found at the bottom, at the lowest level of Urdu/Hindi and neighboring New Indo-Aryan languages (79). Some 30% of Hindi agricultural vocabulary are neither Indo-Aryan nor Dravidia nor Munda, in short, they stem from the unknown substrate language "X". Of particular significance is the evidence for agricultural and botanical terminology borrowed into Indo-Aryan, and to a lesser extent Dravidian, which appears to be neither Dravidian nor Munda (79,80,81). This includes a possibly earlier language, the 'Language X' (79), which Fuller has suggested might be linked to the Neolithic of the Ganges Valley, or to be more precise the dispersal of the 'Language X' might be connected with the spread of rice, pulse, millet and cucurbit agriculture in northern India, from a possible epicenter in the hilly flanks of the middle Ganges zone. Early texts indicate that Indo-Aryan speakers picked up retroflexion as they moved into Pakistan (82), which might be connected with this extinct language. In fact, Witzel (30) identified such an extinct language groups in RigVeda which shows loan words that are neither from Munda nor from Dravidian languages. The loans from this language, the probable 'Language X' are present in the earliest parts of the Rig Veda, whereas plausible Dravidian loans are few and are much later *or in* post-RigVeda, as are those of the *Meluhha* language (30).

There are some indications that a preexisting language, the language of the legendary Meluhha, was prevalent in Sindh before the immigration of the porto-Dravida. The trade of the Indus civilization with Sumeria and later Mesopotamia has left us a number of words that are not Dravidian. Meluhhan was also sufficiently different from Elamite or Sumerian to require a 'translator from Meluhha', whose name is Šu-ilišu (9). In fact, "the language of Marhaši [Bampur area, just west of Iranian Baluchistan] is different from that of the Simaškians [Tepe Yahya in southern Central Iran], and only very partially Elamite-related (2). Apparently, there was a language boundary, somewhere to the west of the present Iran-Pakistan border. Possehl identifies the area of Meluhha (83) as having a center in the hills and mountains of Baluchistan, closer to the population center of the early Indus civilization. This allows for a hypothetical identification of the Marhaši language with that of Meluhha, and makes a thorough investigation of the data of Book 8 of the RgVeda even more important.

Witzel has further inferred a separate dialect or language that seems to have been focused in the southern Indus or greater Sindh region, thus a southern Harappan language, or Meluhhan, to apply to an ancient Mesopotamia term for the region. Loanwords, and versions of the same word, from the Southern and Northern Harappan dialects have been shown to have regular phonological differences (30).

The Para-Munda or the ‘Language X’ layer is not the oldest we can discern in the RgVeda. According

to Witzel (2), there are clear indications of a still older levels of substrates that can be traced, not unexpectedly for the Vedic people, to Central Asia. This feature is of little bearing for the Indus area, unless further study should indicate the influx of Central Asian words, together with the occasional presence of BMAC objects during the later Indus period. There is a host of unstudied words found both in old Indo-Iranian that do not have an Indo-European etymology and must

Going even further, the region could have been populated by pidgin languages where a Vedic pidgin could have been a *lingua franca*.

represent old Central Asian substrate(s), most likely that of Bactria-Margiana (BMAC culture, 2100-1900 BCE). They include plants, animals, and material culture. This substrate must be of considerable age, as it also occurs in the linguistically closely related Old Iranian (Avestan and Old Persian). That automatically means that some of it is shared by the common ancestral tongue of both languages, Indo-Iranian. Even more importantly, the loans in Old Indo-Aryan (Vedic) and in Old Iranian (or Irano-Aryan) often appear in forms which often diverge slightly from each other. This situation is typical for loan words that stem from different dialects of a source language or from two closely related sources languages, e.g. Engl. tea, French thé .

Towards a New Paradigm: From the preceding paragraphs it transpires that we should strive for a new paradigm of the early linguistic (and ethnic) situation of ancient Pakistan. Using the earliest available evidence, the loan words in the RgVeda (and a few words transmitted in Mesopotamian documents), we can establish the following spheres of influence (2). (The dates given below are, as always, very approximate).
• Before 1450 BC. In the Pshtun Country and the

Greater Punjab, the prefixing Para-Mundic or Para-Austroasiatic Harappan language was spoken, along with a few hints of Masica's "Language X"; the Central Asian substrate, brought into this area by the oldest layer of RgVedic,

probably was of little consequence during the Harappan period.
• From *ca.* 1450-1300 BC, the Greater Punjab

saw the first influx of Dravidian words, most likely from Sindh

• The situation in Sindh and Baluchistan is less clear: a variety of the Para-Mundic Harappan was amalgamated with Munda influences from the East, the immigrant Proto-Dravidian, and the early Old Indo-Aryan and in Baluchistan and the Lower Indus Valley. The same kind of amalgamation of Indo-Aryan, Para-Munda and Dravidian elements probably happened in the Greater Punjab also.
• After *ca.* 1300 BC, continuing amalgamation,

evidenced by increase of 'foreign' words in the late RgVeda. The trend continues in the postRgVedic texts with a continuing influx of the same types of vocabulary into the educated Vedic speech of the Brahmins. By this time, the increasing amount of textual materials allows to detail the existence of some other languages in the Greater Punjab or on its rim: Proto-Burushaski in the northwest of Pakistan, Dravidian in Sindh, Gujarat and Central India, and predecessors of remnants language groups, now found in isolated pockets of the subcontinent.

This paradigm, of course, assumes that the language(s) of the Greater Indus Valley was essentially non-Indo-Aryan and that the IndoAryan languages were introduced to the population of the Indus Valley, especially in its northern part, by the intruding Vedic people. This is a huge presumption. There is no evidence, not even a logical imperative, that the linguistic scene of the Indus Valley changed because of the coming of the 'Aryans'. As discussed earlier, the language change to an Indo-Aryan type family could as well have occurred before the migration of the Vedic tribes to the upper Indus Valley.

The Vedic people were not the only people from the west who could bring the Indo-Aryan language to the Indus Valley. There were other Indo-Aryan speaking nomads who encroached the rich pastures of the greater Indus Valley and the Vedic tribes were merely entering the area that was already being transformed into an Indo-Aryan pidgin speaking region. The Vedic IndoAryans acquired so much importance for us because of the RgVedic hymns which they left behind as an oral tradition.

Because of its geographic location, the greater Indus Valley was a cultural and linguistic interaction zone of particularly high intensity. We must presume a large degree of bilingualism and even trilingualism, as it is present in the whole of Pakistan. Going even further, the region could have been populated by pidgin languages where a Vedic pidgin could have been a *lingua franca*. Large pockets of the Para-Munda Indus language, of the newly arrived Dravidian as well as some remnants of the Gangetic Language "X" must have survived as well and it is from these sources that 'foreign' words seeped into the poetic language of the RgVeda. Of course, there always remains the possibility that these exotic words resulted from repeated recensions of the oral text generation after generation till it was finally put to writing a millennium later.

The details for the import of Indo-Aryan language and culture still escape us, though the recent linguistic discoveries related to the BMAC and Afghani area clearly show the trail of this import. More importantly, the time period of such a change has not yet been critically examined and, as stated above, the concurrence of the migration of the Vedic people and the language change has implicitly been assumed and this may not be true. The Vedic people were not the only people from the West who could bring the Indo-Aryan language to the Indus Valley. There could have been other Indo-Aryan speaking nomads who encroached the rich pastures of the greater Indus Valley and the Vedic tribes were merely entering the area that was already being transformed into an Indo-Aryan pidgin speaking region. The Vedic Indo-Aryans acquired so much importance for us because of the RgVedic hymns which they left behind.

The study and analysis of RgVedic texts is useful in its own right in tracing the movements of the Vedic people across the Indus Valley and detecting the changes in textural form with the changes in residential locations of their authors and the time elapse of their movement from the West to the East across the northern Indus plains. These data gives us some extremely useful information, as Michael Witzel (2) has so convincingly shown. Such studies need to be augmented with archaeological data, which are unfortunately not yet available. As is well known now, steppe influence is found in the BMAC but does not extend beyond it; instead, there is some BMAC influence that is found from Susa to Harappa. On the other hand, there is, for the period in question, a huge gap in exploration between Khorasan and Kabul for the mid-2nd millennium BC.

I n other words, the whole convoluted, and by now highly emotionalized, question of the socalled Aryan 'invasion' or immigration/trickling in may boil down to the decision of some opportunistic

transhumant tribes of Greater Iran [particularly, Eastern Afghanistan] who opted

to stay on in their winter quarters in the Indus plains, instead of returning to their mountain pastures in the spring.
(*Michael Witzel*).

Against this background, it seems possible that some bands of speakers of early Indo-Aryan and Dravidian entered the Indus Valley independently of each other, perhaps even at about the same time: the Indo-Aryans via the Khyber and maybe some other passes in East Afghanistan, and the Dravidians via Baluchistan, both as pastoral peoples with very little agriculture; both exploited the system collapse of the Indus civilization, and occupied the newly open lands which could now profitably be used for pastoralism. In other words, the whole convoluted, and by now highly emotionalized, question of the so-called Aryan 'invasion' or immigration/trickling in may boil down to the decision of some opportunistic transhumant tribes of Greater Iran who opted to stay on in their winter quarters in the Indus plains, instead of returning to their mountain pastures in the spring (2).

While this could have provided the initial trigger for the introduction of Indo-Aryan language, spiritual and material culture into Pashtun Country, Gandhara and the adjoining Punjab, it would also have set the stage for the expansion of the suddenly much more attractive pastoral economy. In other words, Ehret's scenario of a 'billiard ball like' expansion of a newly synthesized culture and its status kit (26) applies. This model provides all ingredients for the subsequent spread of the Vedic language eastwards into Haryana and beyond, and it also explains why the term *arya* seems to be so vague in the RgVeda: some local people (with 'foreign' names) had opted to become 'cultural Aryans', others, the *dasyu*, did not (2).

While Indo-Aryan culture and language may have spread over the Punjab along the lines of this scenario, one also has to consider that the earliest Indo-Aryan of the RgVeda period could not yet be in close contact yet with the immediate agricultural successor cultures of the Indus Civilization during the period before *ca.* 1450 BC, as the post-Harappan cultures predominantly are found expanding further east, in East Punjab/ Haryana (70,84).

In the long run, as Cunningham has recommended (16), it is suggested that attempts to understand the meaning of the Indus script should concentrate on the study of the archaeological context of the Indus script itself, rather than trying to assume what the language of the script was and then set out to decipher it.

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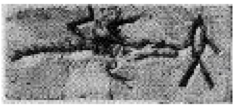
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Chapter III.4.

The Illiterate Harappans?



Ever since the discovery of the Indus Civilization, it has been universally assumed that Indus inscriptions were the

written manifestations of the Indus language. As indicated in the last three chapters, extensive efforts have since then been made to decipher this script but none of these attempts has met with any plausible success. Not only the decoding of the script is yet at hand but there is not even an agreement on the language (or languages) that this script is supposed to encode. One of the hurdles has been the absence of any inscription that was more than a few signs long, the availability of which is considered essential for any successful decoding efforts. In short, the view that the Indus Valley was home to a literate civilization has been subscribed by nearly all historians, linguists, and Indus archaeologists but no one knows what these inscribed symbols mean. The same position has been taken in this book in general and in the last three chapters in particular.

In view of the several unanswered questions about the inscriptions, the complete failure of decipherment attempts, and a strange absence of Indus texts any longer than a few symbols, some unorthodox questions have begun to be raised in recent years. The most radical question is about the nature of the Indus inscriptions itself: Are these inscriptions indeed the instances of encoded speech? In other words, is the Indus script really a script?

The insistence on the Indus inscriptions on seals and tablets probably stemmed from the general belief in the past century that the use of writing was a necessary indicator of complex urban societies, such as the Harappan Civilization. It was only recently that it was shown that it was an incorrect assumption. There were many major urban cultures in the world which did not employ writing, such as the Andean cultures (Moche, Chimu, Inca, etc), but that didn't prevent them from building impressive states whose complexity rivals many in the Old World. There is now a general agreement that writing is not an absolute requirement of an urban culture although most of the urban societies do embody the art of writing in their culture. Despite this correction, the criterion of writing is still being used to provide a more rigorous definition of "civilization”.

The dissenting voices have been few and rather muted and cautious. In a stray paragraph in an early survey of ancient Pakistan, Fairservis came close to being the first major researcher to break with linguistic views of the Harappan inscriptions. The remarkable passage cited below from one of the great archaeologists of the twentieth century has been forgotten; it is quoted here in full. It was apparently written in the late 1960s, but did not make it to print until several years later:

“Seal writing is not necessarily writing derived from the oral language. It has its own meanings and in effect need not have verb, adjective, or adverb. Rather it may be simply a kind of label specifying the individual or his god, house, or belongings, much as a heraldic device uses iconographic elements limited in number in countless ways to name the individual or an institution. Except for the numbers, which suggest bookkeeping and thus more mundane motivations, one cannot help but feel that the Harappan script is of this character. It appears to be a script a full step above the potters' marks of pre-Harappan times but below the complexity of early hieroglyphic Egyptian or Sumerian which

was already ideographic. The script has little preamble except possibly in the potters' marks. Throughout its known history it shows little or no change and disappears with the Harappans and their seals. Though it is writing in one sense, it does not appear to have been much more meaningful to the Indus people than the repeated motifs that appear on their pottery. However, tomorrow's shoveling may reveal a room full of tablets and change this so limited interpretation" (*2*).

Fairservis eventually reversed his position and reverted to older linguistic models of the inscriptions. What changed his mind were not finds of rooms filled with tablets - none were forthcoming - but the spectacular public announcement of a breakthrough by the Finnish group led by Asko Parpola, who in 1969 announced that his group had harnessed the infant field of computer science to prove that the 'language' of the inscriptions was proto-Dravidian. The fact that the Soviet team also made similar claims in roughly the same period reinforced Fairservis' about face, sending him on his twenty-year odd quest to 'decipher' what his own archaeological instincts suggested and much evidence today can confirm wasn't a script in the first place (3).

Although serious doubts about the nature of the Indus script have been offered by Mackay (1), and somewhat more spirited commentary was jotted down by Fairservis in the past, it is more recently that the question has really seen the light of the day. More particularly, it is Steve Farmer who seriously pioneered this line of enquiry in 2002. Michael Witzel and Richard Sproat later joined Steve Farmer in questioning the universally accepted proposition that regards the image of the literate Indus people as an uncontroversial historical fact. Their joint paper on *The Collapse of the Indus-Script Thesis: The Myth of a Literate Harappan Civilization* distills their views on the subject. This paper, published in 2004 (6), started a debate that centered on the question: Was the Indus Civilization a literate society and were the inscriptions on the countless seals and tablets found at Mohenjo-daro and Harappa really an encoded speech? The debate has just started and several scholars have already come into foray.

Paradigm of Non-script Civilizations: The paradigm of nonlinguistic civilizations, although in discussions for some time, is a new twist to the theories of civilizational development and its application to the situation in the Indus Valley. Here a completely new proposal has been made, denying the wellaccepted linguistic character of the Indus inscriptions and proposing that massive multicity urban civilizations can form and remain stable for long periods without writing. This paradigm also proposes that in multi linguistic civilizations, the use of nonlinguistic inscriptions may in fact be more effective than writing in promoting cultural and social cohesion.

The third millennium BC was an era of new, unique economic and political configurations in a part of the world that can be called Middle Asia: the region between the Indus and the Mediterranean bounded on the North by Bactria and Central Asia and on the South by Arabian Gulf. The Middle Asian Interaction Sphere is made to manifest in shared artifacts, including objects of' trade and exchange as well as artifacts style and design motifs. Mesopotamian sources add written documentation of some of the activities within the Middle Asian Interaction sphere, especially the maritime trade in the Persian Gulf. Of these regions, only Mesopotamia was a confirmed user of 'script', i.e., a literate society. The Bactrian region is nonlinguistic and the status of the Indus Civili

"While every script is composed of signs, not every sign (or every group of signs) is necessarily the manifestation of a script" ***Jean-Pierre Olivier et Louis Godart, Cor***

zation is still to be confirmed as literate. This means that excepting Mesopotamia, the vast zone, covering the entire area of Middle Asian Interaction sphere remained stable for more than half a millennium without having 'script' for expression and record. The Indus Civilization was a part and parcel of this region and it should not be a surprise that it exhibited the same civilizational characteristics as the other parts of the region.

Farmer *et al.* (6) introduced the evidence that the Indus Civilization, although the most expansive of all and the most advanced in many respect, fell in the category of non-literate urban civilizations and that in the region of South Asia the condition of nonexistence of' script prevailed for at least for another thousand or more years. They set out to prove that the thousands of short inscriptions found on Indus seals, tablets, copper plates, potsherds, and other durable goods were not closely tied to any spoken language. In their opinion Indus symbols were not capable even in principle of encoding speech or long texts. Farmer and his colleagues provide tests of this thesis by a detailed reexamination of Indus symbol frequencies. Further, the authors note that many Indus symbols are incredibly rare. Half of the symbols appear only once, and three-quarters of the signs appear five times or fewer. Evidently,

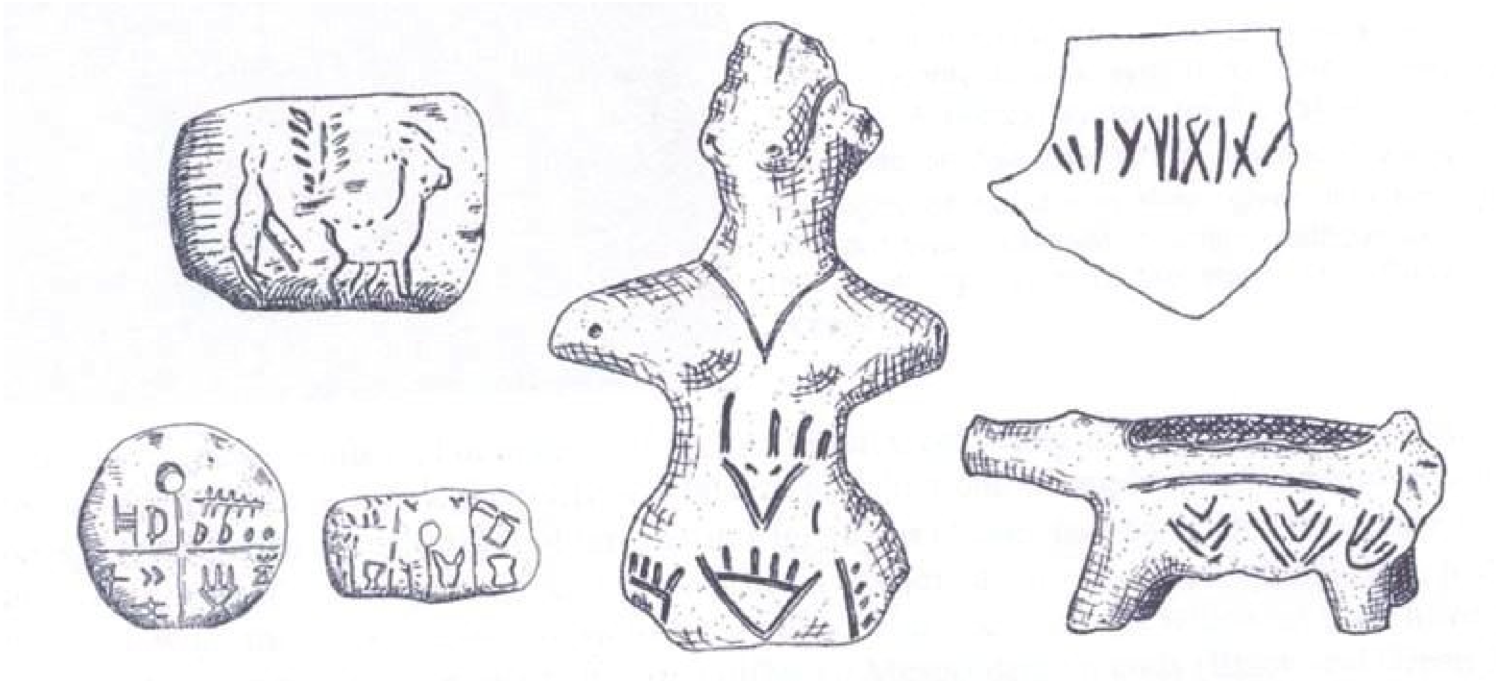
rarely used signs are not likely to encode sound. It is as if many symbols "were invented on the fly, only to be abandoned after being used once or a handful of times," the researchers note.

The authors bring to our attention the fact that the average length of the 4000 to 5000 Indus inscriptions is 5

signs. The longest known inscription contains 17 signs, and fewer than 1% are as long as 10 symbols. They argue that such short "texts" are unprecedented for actual writing. Although many scholars assert that longer inscriptions may have been made on perishable materials, the authors note that there is no archaeological evidence of the imperishable paraphernalia that typically accompanies literate culture, such as inkpots, rock inscriptions, or papermaking devices. The brevity of most inscriptions and the lack of archaeological evidence of a manuscript tradition add up to a sign system that does not encode language, they argue.

“The implausibility of the view that the socalled Indus script was true writing is suggested in many ways that do not require sophisticated analyses. The simplest argument is the best: the sheer brevity of the inscriptions. We possess thousands of inscribed Indus objects on a wide

range of materials. The average inscription is 4-5 symbols long and the longest, found on a highly anomalous piece, carries 17. Before our paper, the lack of real texts was explained away by invoking the purely speculative image of lost perishable manuscripts.The speculation was spurious: we know of hundreds of literate societies, but not one that wrote long texts on perishable materials but failed to do so as well on durable goods.” Thus did Farmer and Witzel argue in their 2004 paper. Turkestanstan, and Iran as amulets. Although they are clearly the numbers, they do not denote anything mathematical or convey any linguistic meaning (see Chapter III.1). Another way to look at the Indus script, as stated above, would be to look at the different combinations and permutations of travel signs, strung up in short horizontal lines and displayed along the highways of America and Europe. While these signs do convey a message, they are by no means a script or an encoded American or European ‘speech’.

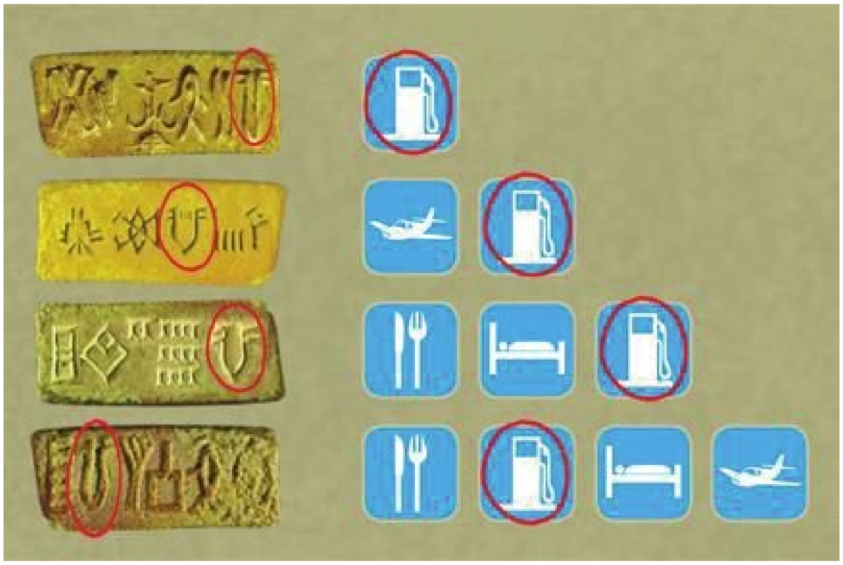


Examples of so-called-Vinca inscriptions, from southeastern Europe. That the symbols were part of a pre-Sumerian script in a linguistic sense can be safely dismissed, but the signs did have some features in common with Indus symbols, including relative stability over long periods, evidence in some types of inscriptions of ritual functions, and cases of apparent ligaturing and sign clustering (*Farmer, Witzel, Sproat***)**

Farmer and his associates add that a society does not need to be literate to be complex. "A big, urban civilization can be held together without writing," they say. They also suggest that the Indus people most likely had many tongues and were a rich mix of ethnicities like Pakistan is today. Wells (11) has found marked differences between signs in the upper and lower Indus River regions, backing up the theory of a more diverse society. But others doubt that a civilization spread over more than half million square miles, and with uniform weights, measures, and developed trade, could manage its affairs without a script.

In rejecting the linguistic nature of the Indus inscriptions, Farmer and his associates ascribe to the Indus notations a nonlinguistic symbol system, the examples of which are found in several traditions in southeast Europe, the Middle East, Crete, and the Americas. For instance, the Indus ‘script’ can be conveniently compared to inscriptions found in prehistoric southeastern Europe around 4000 B.C., where the Vinca culture produced an array of nonlinguistic symbols often displayed in a linear form. Taking an example from modern times, these ‘written’ inscriptions can be compared with the “inscribed” traffic symbols commonly seen on the American highways.

If the Indus inscribed symbols did not represent an encoded speech, then what function did they perform? According to Farmer and his colleagues, the Indus symbolism served a wide range of religious, social, political, and economic functions without ever evolving into a script. In this sense, the signs may have been considered magical - as the Christian cross can be - or they indicated individuals or clans, cities or professions, or gods. Perhaps in the same category can be considered the Arabic sacred numbers such as 786 and 3-rows/3-columns numerical combinations which sum up to the same total whether added horizontally, vertically, or diagonally, worn by the Muslims of Pakistan, Afghanistan,



On the right: American highway 'script', short 'inscriptions', each inscription ending with a 'high-frequency' symbol (read right to left). On the left: Indus trade 'script', short 'inscriptions', each inscription ending with a 'high- frequency' symbol (read right to left) (*SteveFarmer*)

Historical implications of this hypothesis are enormous, not all of them negative. In the authors' opinion, the recognition of the nonlinguistic nature of Indus inscriptions paradoxically enhances their historical value, throwing light on a giant ancient civilization that survived for many centuries without true literacy.

Given the ground-breaking nature of the hypothesis, the reader is well-advised to pay serious attention to Farmer and his associates in examining the issue. In the following, we reproduce some excerpts from their positional article sited above. An extensive list of references is attached with the original article and these can be useful for a critical examination of this point of view.

Brevity of Inscriptions and the Lostmanuscript Thesis: The Indus inscriptions are remarkably short and no example of a long inscription on any medium has so far been found. This absence of long Indus inscriptions is unparalleled in any literate civilization represented by even a fraction of the number of inscriptions in the Indus corpus. One body of inscriptions inviting comparison is written in the largely undeciphered Linear Elamite script, which was briefly used in the last half of the twenty-second century BC by the Harappans' closest literate neighbors. Only 21 or possibly 22 Linear Elamite inscriptions are known today; most of them are longer than the longest of the known 4,000 Indus inscriptions. Despite their tiny numbers, Linear Elamite texts of significant length show up on many durable objects on which we expect such texts from literate civilizations: on sculptures, votive boulders, stairways, and baked-clay cones, disks, and tablets. One exquisitely rendered silver vase carries a solitary line of Linear Elamite that on its own is 2 1⁄2 times longer than any known Indus inscription.

Potsherds were among the most popular media for writing medium-sized texts even in ancient civilizations that wrote extensively on perishable materials; the reason for their popularity lay in their easy availability and in the fact that most perishable writing materials required elaborate preparation before they could be used. Inscribed Indus potsherds, most of which have never been published, exist in very large numbers, but all of these differ radically from those in any known literate civilization: the average inscribed potsherd in fact carries far fewer than 4.6 or so average signs found on Indus

inscriptions as a whole. Moreover, with few exceptions, Indus inscriptions of this type were apparently made before and not after the pottery was broken, and when located on the bodies of the vessels tended to include oversized symbols that few naïve observers would be tempted to classify as writing. The evidence overall makes it impossible to credit claims that pottery or potsherds were used by Indus elite to "scribble messages" to one another (12), let alone to write longer texts, as was indisputably the case for over three thousand years throughout the Near East. Good reasons exist for suspecting that at least some of These symbols may have represented deities who were the intended recipients of offering in the pots.

Marshall and his collaborators were acutely aware of these problems, but publicly at least, passed over them as rapidly as possible, claiming instead that Indus scribes must have written their long texts on "birch bark, palm leaves, parchment, wood, or cotton cloth, any of which would have perished in the course of ages". The same strategy was adopted in Hunter's 1929 doctoral thesis, which was the first book-length study of the Indus inscriptions (13). While all writing from the Indus Valley discovered so far shows up only on seals and a few other durable materials, Hunter notes: "it is obvious that the literature of this people was confined to the 700 off seals and amulets etc. unearthed [by 1927]. The absence of lengthier documents among the finds suggests that for ordinary purposes perishable materials were used. That clay was not among them has already been inferred. Perhaps they utilized skins, as Herodotus tells us the Phoenicians did, perhaps papyrus or silk" (13).

Three Lessons from the Indus Case (Steve Farmer) 1. The discovery of a random seal or inscription with a small chain of symbols on it (or even 4,000-5,000 of them) is not necessarily evidence of a new writing system. 2. Massive multi-city urban civilizations can form and remain stable for long periods without writing: in multilinguistic civilizations, the use of nonlinguistic inscriptions may be more effective than writing in promoting cultural and social cohesion. 3. Fluctuations in Indus sign frequency are not epiphenomena of language encoding: studies of these fluctuations can provide detailed information about social and religious developments in Indus society.

Following its casual birth, the lostmanuscript thesis has been repeated frequently ever since, with the suggestion often added that there once existed a "vast collection of writing on perishable materials than on stone and baked clay" (14), implying the potential existence of buried libraries or archives. The presumed output of the Harappan is sometimes compared to that of the ancient Near East or pre-modern Mesoamerica. While almost all researchers have carefully sidestepped the whole issue – leaving the question of how the Indus Valley was 'literate' oddly unaddressed – the possibility was normally left open that long texts might some day materialize, presumably conserved in protected environments, like the early Buddhist manuscripts recently found in or near former Indus territories, or far older Aramaic texts recently discovered in Bactria. Even Fairservis, who never endorsed the manuscript thesis, in his early writings acknowledged the possibility that long tablets might someday be discovered (2), and in his later works left no doubt, long texts or not, that he believed that the Hardpans possessed a fully enabled script that was capable in principle of producing such texts (15).

Markers of Manuscript Producing Traditions: The first direct challenge to the lost-text thesis emerged from recent predictions of a general model of the evolution of manuscript traditions, whose origins lay in cross-cultural studies of pre-modern Indus, Chinese, and Western thought (16). The

manuscript production traditions leave behind certain markers over long periods of time. The absence of expected byproducts of these processes in Indus artifacts and in the oldest layers of Vedic sources suggests that no written texts (not even in the sense of fixed oral 'texts' of the later Vedic type) showed up in Pakistan or India until long after the collapse of Harappan Civilization. This contrasts with those in ancient civilizations that we know for sure wrote extensively on perishable media. Civilizations in this class include those of the Egyptians, Chinese, Neo-Assyrians, Neo-Babylonians, Persians, Greeks, and Romans. The most important markers of manuscript production in these societies include finds of long texts on pots, potsherds, vases, and similar durable goods; long inscriptions on cave walls or cliff faces, frescoes, stairways, plaques, cylinders, bricks, buildings, and similar media; representations of scribes, inkpots, brushes, pens, and other literate paraphernalia; representations of scribes, texts, and writing instruments in art; and major changes in the shapes and orientations of signs tied to scribal attempts to increase the efficiency of copying long texts.

Findings of markers like these have confirmed the existence of manuscript traditions in a variety of civilizations in which not a trace of perishable manuscripts have survived, most notably in those of the Neo-Assyrians and NeoBabylonians. Finds of writing utensils from early historical times are also common within Indus territories, as shown for example in Marshall's own reports on his long-term excavations at Taxila. No such marker has been found from Indus Civilization.

The most obvious missing marker of Indus manuscript production is sufficient to close the case: the complete absence of Indus texts of any length on durable goods, which shows up in abundance in every pre-modern civilization that is also known to have written on perishable materials. Ironically, some of the ancient world's richest finds of this type show up again in Pakistan in the form of rock addicts of Ashoka in the Pashtun country and Eastern Afghanistan, and most dramatically the thousands of rock and cliff inscriptions from post-Indus times, written in at least ten languages or scripts, found in the passes of the upper Indus Valley linking Pakistan to China through one branch of the so-called Silk Road.

"The manifest brevity of Indus inscriptions and the lack of evidence for 'lost' manuscripts, contradict the universally accepted view that the Indus Valley was home of one of the four major literate scripts. In fact, the evidence confirms a contradictory suggestion: that the Indus system was neither able to, nor apparently meant to, record speech", conclude Framer et al.

Sign Frequencies: The frequent repetition of a small number of signs is generally held as an evidence of an encoded speech. About 12% of an average English text, for example, consists of the letter "E," often used repeatedly in a single sentence to express a certain sound. In the case of the Indus script, very few symbols are repeated within individual inscriptions, indicating that the signs do not encode sounds.

Estimates of the number of distinct Indus symbols vary, but most counts since the 1960s symbols vary, but most counts since the 1960s 400 signs. Varying percentages of that number are typically represented as 'complex' or 'compound' signs that combine two or rarely three symbols in relative straight forward ways. One Canadian researcher, Wells (11) counts over 600 signs by classifying far more variants than other scholars as separate signs. Rao (17) went to the opposite extreme, arguing that mature Indus inscriptions included no more than 20 signs; he arrived at this number by decomposing Indus pictographs into simple strokes that he associated in turn with Sanskrit phonemes;

the underlying aim was to suggest that the first alphabet was invented in the Indus Valley by what Rao pictured as ‘Vedic scribes’. Rao’s views have no serious backers today even among extreme Hindu nationalists, in part since the pictographs he decomposed in this fashion often depict obvious human or divine forms, animals, plants, farm instruments, and other recognizable objects.

Whatever the total counts of signs, all major studies agree that a small number of symbols dominate in Indus inscriptions. Just four of 417 signs account for 21% of the 13,372 sign occurrences in Mahadevan’s concordance; eight signs make up 31%; and twenty signs over 50%. Attempts have been made to statistically compare the dependence of cumulative percentage contribution on sign frequencies of the Indus script with those of other linguistic as well as nonlinguistic sign systems. But the conclusions drawn are not definite and the data is definitely open to different interpretations. It appears that studies of general sign frequencies cannot reliably distinguish scripts from non-scripts.

Despite this limitation, we can distinguish the Indus system sharply from Egyptian hieroglyphs and similar scripts if we approach the signfrequency issue from a different angle. High sign frequencies are normally fairly reliable markers of high levels of sound encoding in scripts, reflecting sound repetition at some level in the underlying languages. In the Mesopotamian scripts, contemporary with the Indus system., the smallest groups of encoded sounds were full or partial syllables; in Egyptian scripts, which omit vowels, the smallest units were consonants or consonant sequences; the earliest alphabetic encoding did not appear until the second millennium BC. The dominance of high-frequency signs in the Indus corpus is thought to be one reason why high levels of sound encoding are normally posited somewhere in the system, most often in the form of a full syllabary; the apparent overlaps in general sign frequencies with Near Eastern scripts provide one support for the common view that a full Indus syllabary was invented at one time under the direct or indirect

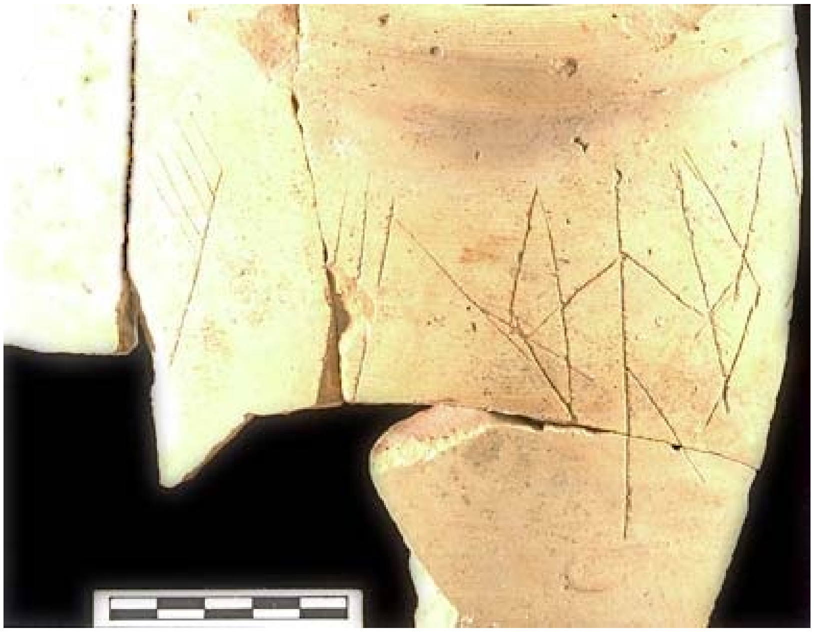
But all these views fall victim to a revealing paradox: Th.e high sign-repetition rates in the Indus corpus overall contrast sharply with low signrepetition rates in individual inscriptions, which suggest that little if any sound encoding existed in the system. This problem is nicely illustrated in the longest Indus inscription found on a single surface, which contains 17 basic signs. The inscription is typical of the Indus corpus in being composed largely on non-repeating highfrequency symbols: 10 of the 18 highest frequency signs in Mahadevan’s concordance show up in the inscription but not one of them shows up twice.

Findings like this are not limited to the famous seals, but extend to all inscription types and to the corpus as a whole: among the 20 highest frequency signs in Mahadevan’s concordance, 10 have zero or near zero repetition rates in the entire 3,000 inscriptions covered in the work. Signrepetition rates in single inscriptions for most of

4 Indus symbols = over 21% of the Indus corpus
8 Indus symbols = over 31% of the Indus corpus
20 Indus symbols = over 50% of the Indus corpus

the remaining high-frequency signs are also anomalously low, and oddities in the spatial distributions of the few signs that do regularly repeat in single inscriptions make it difficult to picture that any of them involved coding for sound. Most importantly, nowhere in Indus script do we find convincing evidence of the random-looking types of sign repetition expected in contemporary phonetic or semi-phonetic scripts. In many ancient scripts, some high-frequency signs can be expected to show up only once in certain types of short inscriptions; in seal inscriptions or name lists, this is true of gender

determinatives and whole-word signs standing for titles or divine names incorporated in human names. But the finding that most high-frequency signs in a body of inscriptions as diverse as those in the Indus corpus rarely if ever repeat in single inscriptions by itself suggests that those inscriptions contained little if any phonetic coding.



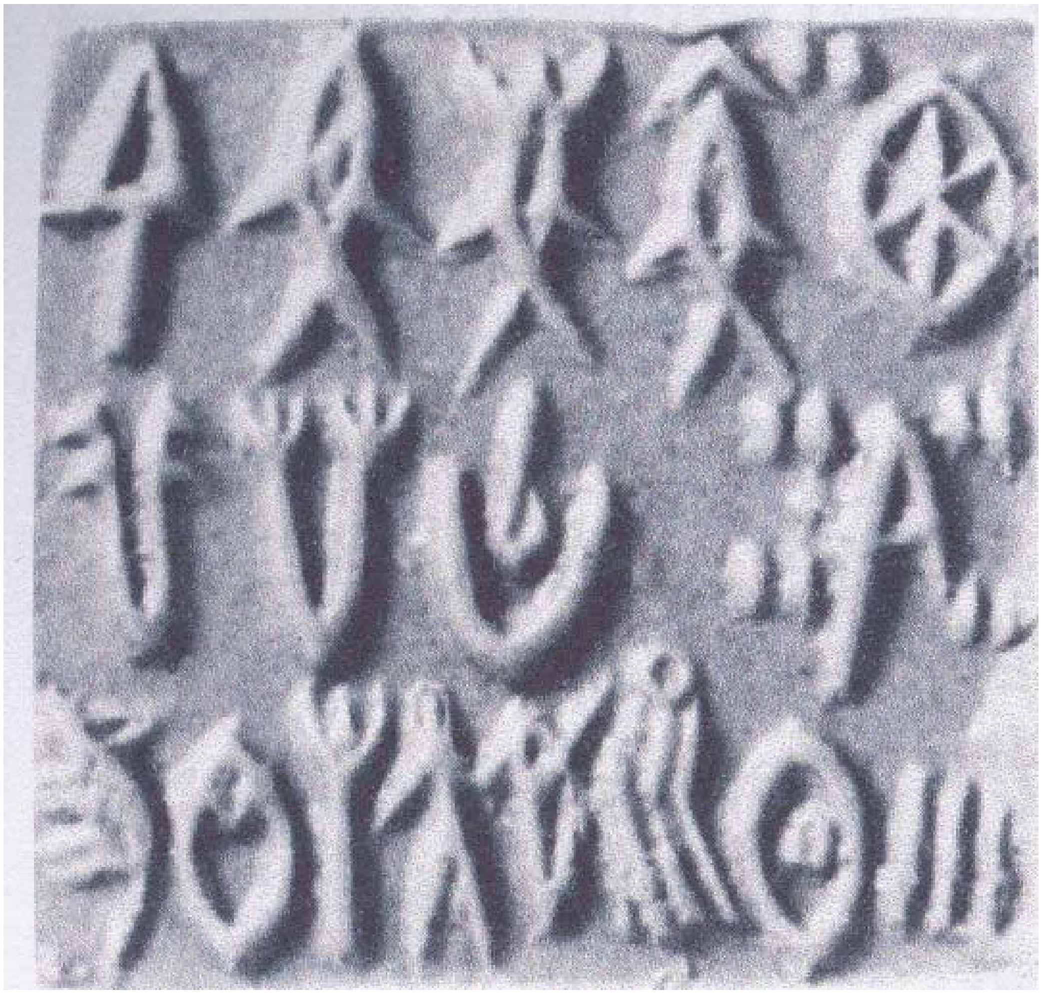
An Indus sherd from a large broken jar crudely inscribed with a short group of symbols. Inscriptions of this type were normally made before and not after breakage, and when found on bodies of vessels typically carried oversized signs of the type illustrated here. The anthropomorphic figure carrying two bows also shows up on Indus seal inscriptions.

A long line of researchers stretching back to the 1920s has suggested that phonetic information may have been partly incorporated in the inscriptions by means of ligatures, or small graphic modification of signs (similar to *zabar, zer, pesh, shadd, etc.* used in Urdu, Persian, and Arabic). The best-known case of claimed ligaturing shows up in the three high-frequency 'fish' symbols clustered at the top of the inscription in figure shown, which have often been represented a ligatured variants of a single sign. Whatever the case, even putative ligaturing factors in a few high-frequency Indus signs, and in all these cases those signs again have a zero or near zero repetition rates in single Sign repetitions in Egyptian and Indus inscriptions closely matched by size and type. Overall sign frequencies in large samples of Egyptian and Indus inscriptions are nearly identical, but sign repetition-rate in single inscriptions differ sharply.

The combination of high general sign frequencies and low repetition rates in single inscriptions is inconsistent with what we expect from fully enabled scripts. The attached figure illustrates more typical findings using a fragmentary text written in the Luwian heiroglyptic script. The first inscriptions in this logosyllabic (partly whole word, partly syllabic) system appeared in the midsecond millennium BC in Hittite Empire period; the latest show up in the Neo-Hittite era, which extended down to c. 700 BC.

While its developmental course remains uncertain, the evidence here is clear that this writing system possessed a fully syllabary at an early date. Similar patterns of repeating signs also show up in Egyptian hieroglyptic, which similarly consist of a mix of phonetic and non-phonetic elements. Due

to the close overlap in general sign frequencies that were found in Egyptian and the Indus inscriptions of similar sizes and types, a comparison of the two systems would be quite



A seal impression of the longest Indus inscription found on one surface. The inscription is typical of Indus inscriptions in consisting largely of non-repeating high-frequency signs. Note also the three fish symbols clustered in the top row: they are apparently ligatured

versions of a single sign.

instructive. Farmer and associates took 67 Egyptian cartouches, containing 465 signs, with an average length of 6.9 symbols per inscription and compared them with 67 legible seal texts in the *Corpus of Indus Seals and Inscriptions* that include 7-8 signs. The results of their comparison are tabulated in the Table below. As expected of largely phonetic inscriptions, the Egyptian cartouches contain high levels of sign repetition; in contrast, less than 1/6 as many repetitions show up in the Indus inscriptions. These results once again clash with the standard view that the Indus system contained a full syllabary or any other systematic type of sound coding.

Singletons and Low Frequency Signs: Further evidence that clashes with the Indusscript thesis shows up in the large number of unique symbols (or ‘singletons’) and other rare signs that turn up in the inscriptions. 27 percent of the 417 signs in Mahadevan’s concordance occur only once in 13,372 sign occurrences; 52 percent show up five times or less. There are reasons to suspect that even these often repeated figures are too low, since Mahadevan groups a number of rare signs of doubtful identity and counts every inscription mass-produced in molds

A number of inscriptions also contain more than one singleton in addition to other signs, making it difficult to imagine how those signs could have possibly functioned in a widely disseminated script. Even odder than their absolute numbers is the way that new singletons and other rare signs keep cropping up with each enw batch of discoveries. If Indus symbols were part of a genuine script, we would expect the percentage of singletons and other rare signs to drop as new examples of those signs showed up in new inscription. Paradoxically, those percentages appear to be rising instead over time, suggesting that at least some Indus symbols were invented ‘on the fly’ only to be abandoned after being used once or a handful of times.

Recent studies have shown that large percentages of singletons and other rare signs also characterized proto-cuneiform and the largely derivative proto-Elamite accounting system, which was abandoned centuries before the first Indus



Part of a fragmentary Luwian inscription from the Neo-Hittite era; a few of the inscription’s many repeating signs have been circled. For comparison, see the preceding figure from Indus.

inscriptions appeared. One obvious difference from the

A Comparison with Other Ancient Symbol Systems: How did Indus symbols function if they were not a part of a script? Important suggestions can be found in a wide range of ancient symbol systems that predate or in some cases existed side-by-side with writing for millennia. The earliest example roughly comparable tcomplex and associated cultures in southeastern Europe,



A typical bar seal from Mohenjodaro (flipped horizontally to illustrate how it would appear as a seal impression). The inscription contains 7 non-repeating symbols, 6 of which are among the 20 highest-frequency signs in the Indus corpus

whose earliest inscriptions predate both writing and Indus symbols by several thousand years. Inscribed Indus objects were considerably more sophisticated than Vinca inscriptions, but a number of parallels suggest that both belonged to the same general class of nonlinguistic signs. Some of those parallels includee the relativee standardization of a small core of signs over large geographical areas; the inclusion beyond that core of appearing separately or in conjunction with writing. Most Near Eastern artifacts of this type carry a complex mixture of abstract symbols and iconography, but we also find symbols in some cases laid out in near linear Second millennium BC boundary stones that carry these and rare symbols on successive lines or registers; arrows in these illustrations point to three variations of the high frequency omega sign, illustrated on the preceding tabulation. These boundary stones share a number of important features with Indus inscriptions, including mixturees of high-frequency and rare symbols and patterns, with a result not dissimilar to that seen in pictographic scripts. As in the Vinca and Indus cases, a handful of highfrequency sign dominate in these inscriptions, supplemented by hundreds of rare signs. With the help of written sources, we can identify some of the basic referents of these symbols, but many ambiguities remain, reflecting in part an inherent plasticity in the meaning of the symbols themselves. Most Near Eastern symbols are typically characterized as symbols of deities, although a few could also apparently represent fairly abstract concepts. Even numbers regularly served as symbols for deities or celestial forces in these systems, distinguishing them from the more conventional numbers found in Near Eastern accounting systems; many suggestions of the symbolic use of apparent numbers also turn up in the Indus system.

Just as important as their basic meanings were complex networks of associations that linked deity signs of celestial, terrestrial, and social phenomena. Depending on the mythological, social,

	Egyptian cartouches	Mohenjo-daro seals	Harappan seals
Number of inscriptions and signs	67 inscriptions, 465 signs (average length = 6.9 signs)	67 inscriptions, 495 signs (average length = 7.39 signs)	67 inscriptions, 493 signs (average length = 7.36 signs)
Total repeating signs in single inscriptions	48	8	7

hundreds of unique or rare symbols; evidence in both systems of apparent ligaturing and sign clustering; suggestions of ritual uses of some classes of symbols; and the sudden disappearance of both systems, after centuries of relative stability, in periods of apparent social upheavals.

Even closer to the Indus case were a broad family of Near Eastern symbol or emblem systems whose development can be traced at a minimum from the fourth millennium to the Hellenistic era. Near Eastern emblem inscriptions carried from one up to 2-3 dozen symbols, making some of them significantly longer than any Indus inscriptions. Examples show up on seals, plaques, boundary stones, cliff walls, amulets, and many other media from Egypt to Eastern Iran, or ritual contexts in which they were used, signs of particular gods might similarly stand for particular stars or star clusters, planets, constellations, seasons, months, days, hours, cities, clans, professions, administrative offices, plants, animals, colors, and similar phenomena. Questions of narrative-mythological precedence or temporal or celestial position resulted in sign clustering and positional regularities in these signs of the same types observed in Indus inscriptions. The meanings of symbols also frequently changed as deities rose and fell in status or were replaced by or merged with other gods. For example, the winged disc that was one of several signs of Shamms (Samas) was later transformed into the transport vehicle of the Persian high god Ahuramazda, whose signs fused with

those of the older deity. Similar mergers of signs, which have typically been claimed as evidence of linguistic compounding, show up often in Indus inscriptions, especially in the final centuries of the civilization.

Parallels in Near Eastern sign systems suggest that we can never fix the sense of Indus symbols with anything approaching the precision at the entrance to the temple of Ninurta at Nippur. inferred from study of all variants of those symbols, especially when these survive in pictorial as well as abstract form; from study of all signs with which these symbols tend to cluster; and from analysis of any closely related iconography. But the plasticity of ancient symbols warns us against the old assumption that the Indus system was a simple 'code' waiting to be broken: on the Near Eastern model.

"Koko the signing gorilla has a bigger vocabulary than the Indus wise men,"

Steve Farmer

As suggested by brevity alone, Indus inscriptions were neither able nor intended to encode detailed messages, not even in the approximate ways performed by formal mnemonic systems in other nonliterate societies. Their most likely function, as suggested by
may have existed to conserve symbolic motifs over long periods, the fact that flourishing markets existed in some regions for second-hand seals suggests that the sign sequence on Indus seals may not always have necessarily had any close ties to the seal users. It is reasonable to assume that Indus inscriptions mass-produced in molds, which frequently carry ritual iconography and have no known Near Eastern parallels, when used in communal rituals probably included exegeses of the mythological sign sequences seen on those inscriptions.

Conclusion: Steve Farmer summarizes his and his associates' hypothesis as follows (20):
Conclusion 1: Indus signs were symbolic and mythological in character - not linguistic. He gives five arguments vs the traditional linguistic model of Indus signs:
a) The inscriptions (found on over a dozen different media) average under 4.6 signs each in length, with the longest containing 17 signs - unparalleled in corpus of inscriptions even 1/50th this size.
b) All expected archaeological markers of manuscript production are missing, providing no way around the brevity problem.
c) All inscriptions consists mainly of high frequency signs that rarely repeat even in the longest inscription - impossible in any phonetic script. d) Not one of 4-5000 known inscriptions contains even a suggestion of the quasi-random types of sign repetition expected in semi-syllabic script. Near Eastern parallels, was to as
sociate individuals, families, clans.
Offices, festivals, or professions,
etc. with specific deities or the ce
lestial correspondents, partly for
identification purposes and partly
to draw down whatever magic was
accessible through these symbols.
The same evidence suggests that
some Indus symbols may have
been copied for centuries and in
later eras combined out of defer

ence for the antiquity or magical



power with little understanding of
their original sense. The tendency
to conserve symbols for such pur
poses provides a simple explanation

Examples of apparent unique signs or 'singletons' . A minimum of two singletons and at least several others show up in K-15a.

for why the longest inscriptions
show up in later periods, mirroring
similar correspondences of cummulative growth found globally in manuscript traditions.

In regard specifically to seal inscriptions, we know from Near Eastern sources that the use of a series of symbols to identify a person, profession, clan, or office, did not depend on the exact sense of those symbols being understood, any more than this was true in the case of royal emblems or medieval heraldic signs; moreover, although a tendency within families or professions e) The number of unique signs ("singletons') and low frequency signs is rising and not declining over time - the opposite of what we expect in true scripts.

Could Indus symbols have been wholeword (logographic) symbols, as sometimes claimed (see the last chapter) instead of being phonetic? If so, the semantic range of the system would be so limited that it could hardly be claimed as serious 'script'. "Koko the singing gurilla would have much larger vocabulary (*ca.* 1,000 words) than the Indus literate elite"

These figures apply to all types of inscriptions (on over a dozen media) in all periods of Harappan history, showing that the system was not even evolving in phonetic direction after 700 years of development. Indus sign frequencies are similar to those we find on nonlinguistic systems elsewhere.

It can also be shown in several ways that most apparent numbers in the inscriptions were also symbolic (numerological). Except in one minor case involving counts of sacrifices they had nothing to do with accounting mathematics, unlike porto-cuneiform and porto-Elamite. One piece of evidence for this view lies in analysis of number frequencies, where we find that the majority of number signs that dominate in inscriptions are those with magical number or celestial connotations - 7's, 3's, 12,s, etc - while many other apparent numbers rsarely or never show up.

*Conclusion 2: Like other nonlinguistic sign systems, Indus symbols have multiple and not single referents ("multivocality")***.**

We can learn here from the nonlinguistic inscription in the Middle East found on seals, stelae and boundary stones, which ranged from a few to several dozen symbols in length. Symbol frequencies here are similar to those found in Indus inscription: a handful of very high frequency signs show up repeatedly; signs only repeat in the inscriptions in special cases; and hundreds of rare or unique signs are known that complement the high frequency signs.

Conclusion 3: The oldest and most persistent use of Indus signs shows up in agricultural magic and rituals - not in accounting contexts, as in Mesopotamia or Iran.

The vast majority of Indus signs can be directly or indirectly related to agriculture: typical signs include seeds, fruits, sprouts, grain plants, pulses, millet, trees, sun plus rain signs, farm instruments (hoes, rads, plows, mortar and pestles, rakers, harvesting instruments, etc.), seasonal/celestial or astral signs, and even at times anthropomorphized plowed fields. Just as in the Mesopotamian case, multileveleled referents shoul;d b normally be assumed for each symbol in the divine, cerlerstial, and terrestrial worlds.

Conclusion 4: We find both male and female imagery in Indus agricultural mythology, but in the inscriptional (as opposed to other sources), male imagery prevails.

In general when you turn to the inscription, you find that the imagery is male with as vengeance. All apparent totem animals on classical Indus seals are male, as are most identifiable agricultural deities (for example the figure with a bow and arrow we often see guarding plowed fields, seeds, and plants - sometimes dressed in leaves.

Conclusion 5: Much of Indus mythology was apparently reenacted in outdoor rituals involving mass-produced inscriptions and sacrifice in front of Holy Trees - implying the use of Indus inscriptions in some type of communal indoctrination.

One mythological figure that repeatedly shows up on these mass-produced molded pieces is known from well over 100 inscriptions. The figure is normally shown hunched in front of the Holy Tree (the most common Indus sign). Ion a few cases, we see two such figures hunched down before the Tree.

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A seal impression with a rare sign

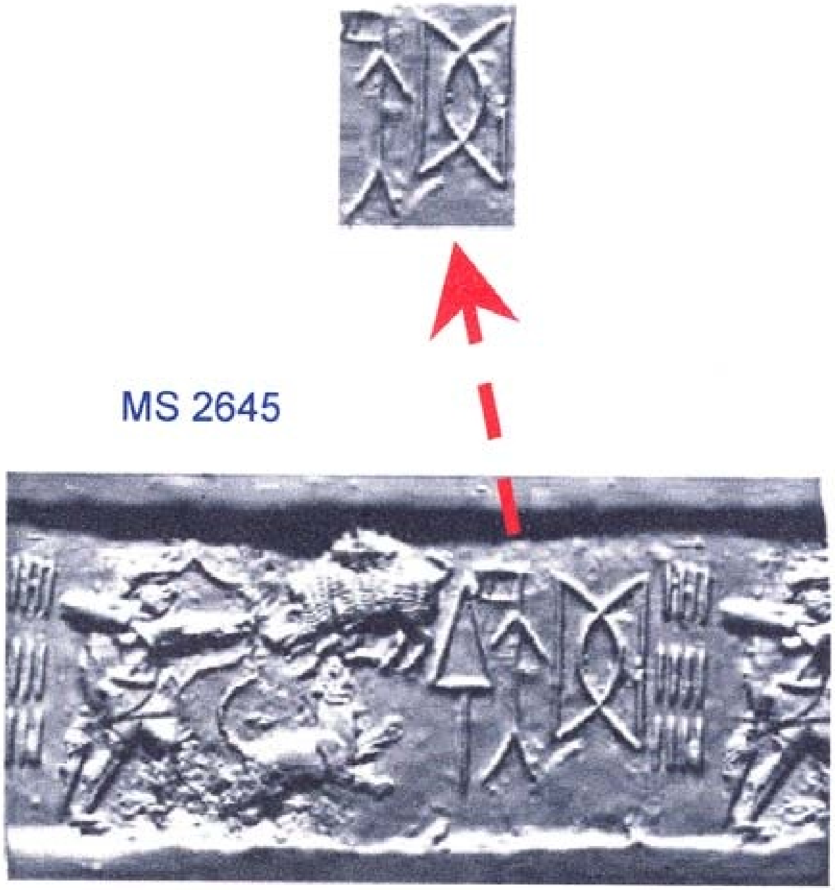




Two other examples of
singletons or unique signs

Conclusion 7: High level of standardization
- in both inscription types and myths - imply political integration, at least in the mature Indus period.

We find a high degree of standardization in Indus seals than in any other known third millennium civilization. Just as we find a small number of Indus signs repeated endlessly in Indus inscriptions, so too we find a small number of myths reflected in the accompanying iconography. One such myth which can be partly reconstructed from many pieces is the story of the man in the tree, who is a part of a complex myth cycle. We note the similarities in the way that one part of the story is portrayed in four distinct cities (e.g. The crossed legs of the man in the tree, etc. As an other example, all animals on Marshall's supposed 'porto-Siva' inscription (a badly anachronistic reading that just won't die) show up emblems on classical Indus seals.



MS 2645 from the Schoeyen collection in Oslo, contains two singletons in a unique cylinder seal from Afghanistan that apparently mixes Indus signs with Akkadian

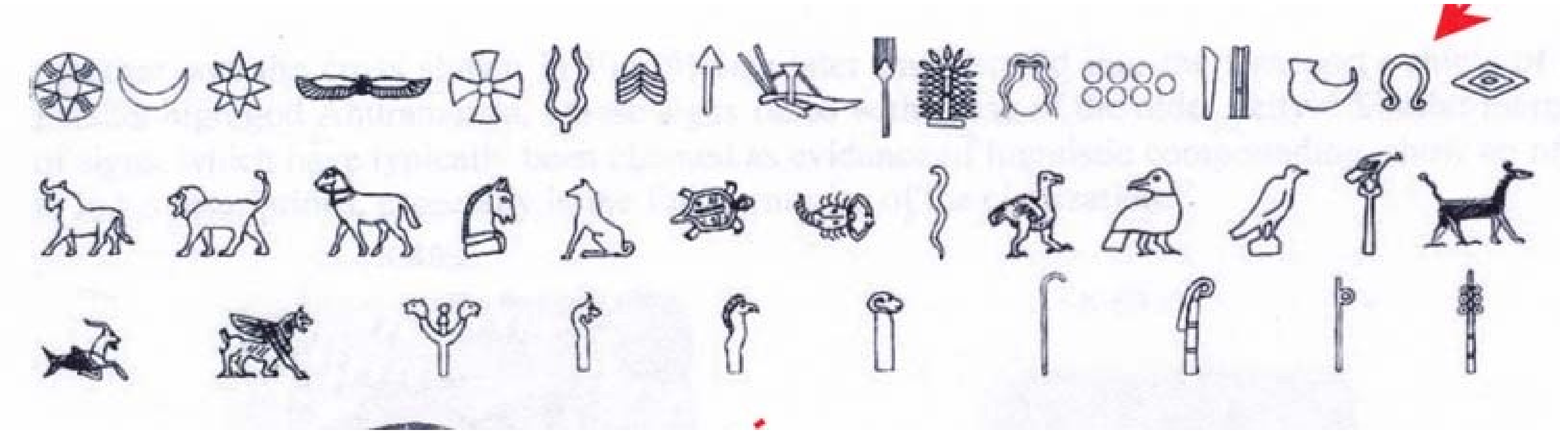
iconography.

ages of horned gods or the Gilgamesh-like figures holding off two animals (tigers and not lions in the Indus case). But these motifs were so widely disseminated from Mesopotamia to the Gulf and Iran to the Indus Valley that it is difficult to ascribe them to specific influences.

The sense you get from comparing Indus materials with those from points west and northWest is that the Harappan had a tightly organized and unusually closed society throughout most of their history - quite possibly by intention.

Insulated Harappans? The critical question remains of why the Harappans never adopted writing, since their trading classes and presumably their ruling elite were undoubtedly aware of it through their centuries of contacts with highliterate Mesopotamians. One possibility, consistent with all known evidence, is that the Harappan elite opposed writing due to the threats it posed to whatever control the symbols gave them over Indus populations. The Indus elite not only discouraged the development of an indigenous writing system but also insulated their masses from the known regions of writing tradition. The hypotheses of a Harappan writing blockade and a purposeful insulation from literate societies provide one plausible explanation for an odd imbalance in artifacts that has long puzzled archaeologists: significant numbers of Indus seals and seal impressions have been found in the Gulf region and far into modern Iraq, but no Mesopotamian inscriptions have ever turned up at any Indus site. Studies of foreign artifacts in the Indus Valley in general suggest that until shortly before the

symbol system disappeared the civilization remained unusu

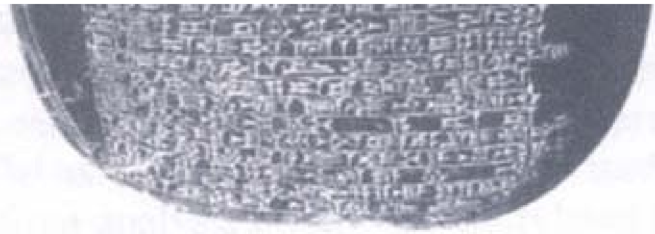


Forty (out of much larger number) of the most common Mesopotamian deity signs.

Conclusion 8: We find surprisingly few intrusive myths or iconography in most periods, and then many (reflecting Central Asian/BMAC influence) just before the Indus symbol system disappeared.

Certain very old mythological influences fro Mesopotamia and other points Northwest certainly show up in iconography associated with Indus inscription - for example, in pervasive imally well-insulated even from its nearest cultural neighbors in the west. Suggestive parallels show up in the last half of the first millennium BC in the resistance of the Brahmins to the literate encoding of their ritual traditions, and in Roman times to rejection of writing by Celtic priests; it is interesting to speculate whether similar motives explain why writing was never adopted by the Harappans' neighbors in the MBAC to the northwest, which



companied by the first large-scale appearance in the Indus Valley of intrusive artifacts. Many of these can be suggestively linked to Central Asian iconography, but the significance of this finding, which was not accompanied by obvious signs of large-scale invasion, is not currently understood; internal rather than external forces may have been decisive in the sudden disappearance of the symbol system.

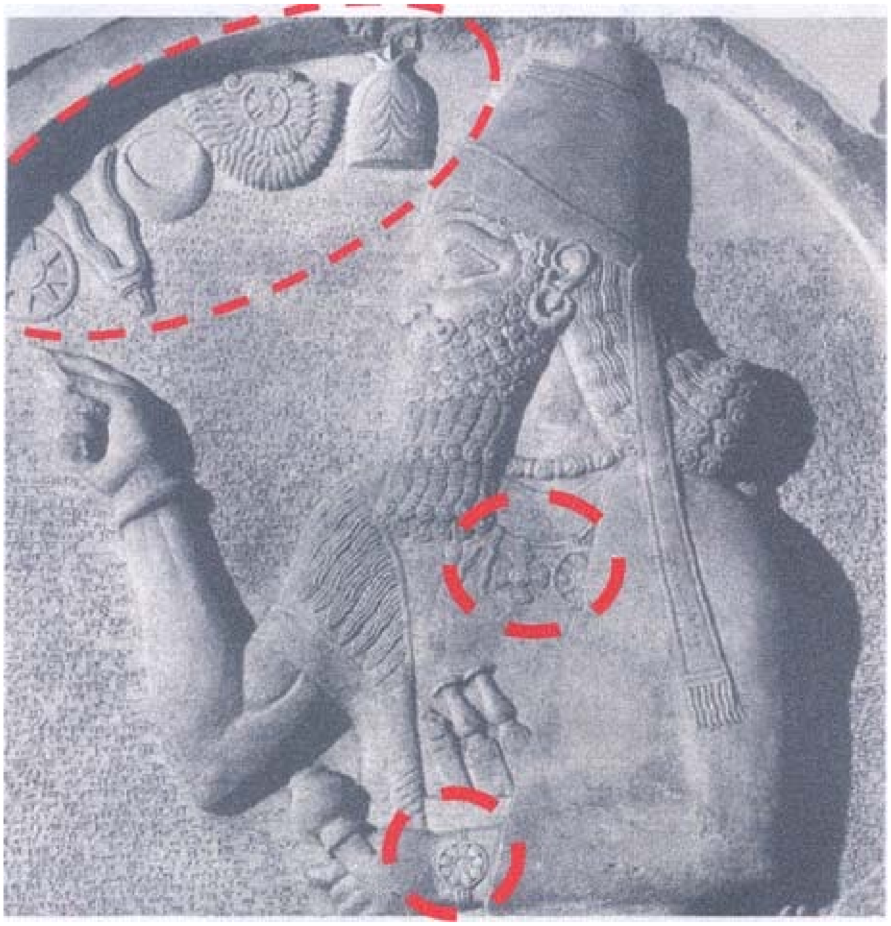
Implications of a Non-literate Society on the Indus Civilization: This change in paradigm evidently has huge implications on our perception of the Indus Civilization - predominantly negative. But, according to Farmer and associates, the evidence that Indus inscriptions did not encode speech increases and does not decrease the symbol's historic value. We know a

Second millennium BC boundary stones that carry these and rare symbols on successive lines or registers; arrows in these illustrations point to three variations of the high

frequency omega sign, illustrated on the preceding tabulation. These boundary stones share a number of important features with Indus inscriptions, including mixtures of high-frequency and rare symbols.

arose from sophisticated fusion of cultural elements from the Near East, Eastern Iran, and Central Asia.

Issues of social cohesion may also have been factors. Studies of loan words in the earliest strata of Vedic texts suggest that just like Pakistan today, Indus territories may have been intensely multi-linguistic, undermining over eight decades of heated debates over 'the' Indus language. In a giant multilinguistic society, a relatively simple system of religious-political signs that could be reinterpreted in any language may have provided greater opportunities for cultural cohesion than any language-based script – as suggested in a different way in our own global age of highway and airport symbols. The adoption of such a system may even help explain why the Harappans apparently managed to expand over a wide geographical area than any literate civilization of the era. The fact that Indus symbols were tied to a pan-Indus ethos of some type is suggested by the apparent suddenness with which the symbol system vanished early in the second millennium BC, which is not typical of the ways that fully enabled scripts disappear. One implication of this finding is that the Indus Civilization may have enjoyed a higher level of political integration than typically assumed and that the disappearance of the symbols involved a sudden shift in the society's religious-political guard. Many questions remain concerning the nature of this shift, which was ac



A stela carrying a five-sign emblem inscription found at the entrance to the temple of Ninurta at Nippur. The illustration shows Assurnasirpal II pointing to the abstract symbols of his major gods. Some of the same signs

also show up on magical talismans on Assurnasirpal's necklace and bracelet (circled).

great deal about literate civilizations, but far less about pre-modern societies that rejected writing for other types of sign systems. Indus inscriptions are the product of the largest Old World civilization of this type known, providing us with a unique window on this poorly understood class of civilizations. The realization that Indus inscription did not encode speech also opens up novel statistical means of exploiting their evidence: fluctuations in sign frequencies in scripts are largely accidents of sound encoding; but studies of similar fluctuations in non-linguistic symbol systems may provide sensitive measures of religious, political, and economical development that are otherwise impervious to historical analysis, even when the meaning of most signs remains uncertain. We are fortunate that statistical studies of this type are just getting underway as new stratigraphical findings from the Harappa Archaeological Research Project (HARP) have begun to provide the first reliable dates for different classes of inscriptions, including most importantly the long bar inscriptions and miniature steatile tablets (21).

Paleographical studies of sign variations allow us to extrapolate these findings to other classes of inscriptions who stratigraphy is less certain, including the magnificent oversized unicorn seals, which can be shown on paleographical grounds to date like the bar seals to the last centuries of the civilization. Statistical studies combining nonlinguistic models of the signs with our increased ability to date inscriptions are capable of providing insights not only into Indus religious and political developments but even into regional variations in agricultural practices, in part exploiting the fact that large numbers of inscriptions appear depict complex mythologies in involving animated seeds,

sprouts, plants, farm tools, and other symbols linked to seasonal rituals.

It should finally be noted that recognition that the Indus civilization was not literate helps explain a number of well-known features of the society that distinguish it sharply from third millennium literate civilizations in the West. A few of these include the lack of monumental architecture, large temples, massive standing armies, and clear evidence of large-scale bureaucratic organization. The paradox remains that despite their lack of writing, and perhaps in part because of it, the Harappans exhibited a surprising high level of cultural unity over a vast area for centuries. One of the biggest challenges of future Indus research lies in discovering what role the symbols played in maintaining that cohesion and possibly contributing to its decline.

Writing is often considered a requirement of large-scale urban civilization. These tendencies originated in the nineteenth century, when the links between writing and urbanization were repeatedly reinforced by finds from civilizations in the Mediterranean, Near East, and Mesopotamia. When the first large scale excavations at Harappa and Mohenjo-daro turned up hundreds of inscriptions in the early 1920s, it was assumed from the start that the same relationship existed between writing and urban life in ancient Pakistan as in Egypt, Mesopotamia, and Elam. Hints in extreme brevity of the inscriptions that something was amiss were brushed aside in favor of the ‘lost’ Indus manuscript that went unchallenged for decades. Repeated claims of decipherment, aided by the many ambiguities in the ways that speech maps to texts, resulted in a long line of pseudodecipherments that, while easily repudiated in details, on a superficial level seemed plausible enough to reinforce the assumption that the inscriptions encoded speech, which had gone unquestioned since the 1970s. Once nationalistic politics were tossed in the mix, by the final decades of the twentieth century the Indus script thesis had carved such deep path dependencies in studies of “Indian” history that it was difficult to observe let alone discuss the many obvious suggestions that Harappan civilization could not possibly have been literate.

The fact that ancient civilizations could not only exist but flourished without writing has been known for decades, but the persistence of the Indus script myth suggests that the full implications of that fact have not taken deep root in archaeological theory. Urban civilizations in the Near East predated writing by thousands of years, and when the technology became available it was adapted or rejected depending on how well it fulfilled specific cultural needs. Massive cities in Central Asia contemporary with those of the Harappans have been excavated that have not yielded credible traces of local writing, while cities in Eastern Iran at best suggest brief flirtations with restricted accounting scripts that originated far to the West. In South America, the giant Andean civilizations never developed writing, making due with abstract symbols and their mnemonic *khipu* system; similarly, in Mesoamerica, neither the Aztecs nor the Mixtecs ever developed full scripts, although they knew them from the Maya that they existed. It has been argued that one reason why these vast Mexican civilizations, whose cities dwarfed those of the Indus Valley in size and sophistication, preferred ‘picture writing’ to fully equipped scripts arose from the fact that the nonlinguistic symbols enhanced social cohesion among their multilinguistic populations - much as we have hypothesized was true in the case of the radically different type of symbols developed by the Harappans.

Reaction and Response: The thesis of non-literate Indus Civilization has kicked up a storm; it was expected. Some of the defense is vigorous, such as that of Vidale, Mahadevan, and Parpola; some muted, such as that of McIntosh and Possehl; and some in the shape of dead silence. We shall take up these rebuttals in the next chapter in some detail, here we review them in generalities for the sake of

closing the present discussion.

For a start, Farmer and his colleagues point to the failure of the Harappan signs to evolve with frequent scribal usage as, for example, the Sumerian script developed from pictorial and geometric signs into highly abstract signs composed of a few wedges. Parpola (22), however, notes that there was, in fact, some scribal simplification of Harappan signs. One may counter Farmer's argument by making a comparison with the Egyptian script: As with the formal carved or painted Egyptian hieroglyphic texts, with their highly conservative sign forms, the surviving Harappan inscriptions were mainly on finely made formal media where the signs were executed to a high standard; a cursive script - comparable to Egyptian hieratic, written at speed, and far less care - fully rendered - could have existed for use on perishable media (23).

Farmer also draws attention to the absence of long Harappan inscriptions on potsherds. If the Harappan signs were a script, he contends, this absence would make it unique among the scripts of literate cultures, who all used potsherds, often like scrap paper. This need only imply, however, that the Harappans had other media that were easier to scribble on, such as cotton cloth or wooden boards, or that the writing medium was not well suited for use on sherds. Likewise, the absence of long monumental inscriptions seems significant to Farmer, but the Harappans did not create monumental art or architecture on which such inscriptions might have been written; the nearest they came to this is the Dholavira signboard, possibly the tip of an iceberg of now vanished public inscriptions (23).

Again, Farmer points to the absence of representations of scribes in Harappan art or script, but in no branch of Harappan art are there portraits of occupational specialists, apart from a tiny number of figurines engaged in daily tasks, such as grinding grain or driving carts; the narrative scenes on a few seals are the closest the Harappans came to specifically themed art, and these are all concerned with religious subject matter.

The frequent singletons in the Harappan script strike Farmer as significant and these seem to increase in number with every new discovery of Harappan texts. This should not be the case with a true script, Farmer and associates argue. They also consider that the proportion of singletons and rare signs is unusually high; other scholars, such as Parpola (22), demonstrate that this is not so, since in general logosyllabic scripts contain a small corpus of frequently used signs and a large number of much less common ones. Moreover, new signs are continuously added, even when the writing system is a fully developed one, something Farmer also denies. Statistically the Harappan script does not differ significantly in its sign proportions from other logographic scripts. A further point regarding the singletons is that many are variants or ligatures of basic signs rather than completely different signs; again, this is something to be expected in a genuine script.

Conversely, Farmer points out that there is a high repetition rate of individual signs within texts in most scripts, something that is not apparent in Harappan texts. This, he suggests, indicates that the Harappan signs were not phonetic. However, the large number of signs suggests that the script used a considerable number of logographic signs, implying a lower proportion of phonetic sounds than in some logographic scripts. Perhaps more significantly, the brevity of the majority of Harappan texts (four to five signs, on average) makes it less likely that signs would repeat within them than it is in the longer texts with which Farmer compares them (23).

The theory put forward by Farmer and his collaborators has not been widely accepted, but it has been valuable in compelling scholars to look afresh at their assumptions about the script and in provoking

a stimulating debate from which a deeper understanding of the script should emerge.

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Chapter III.5.

The Counterpoint



The thesis of illiterate Harappan, discussed the previous chapter, has bitterly divided the field of Indus studies. Sproat (18) states that their arguments “have been accepted by many archaeologists and

linguists,” without actually citing who these “many archaeologists and linguists” are. In fact, a number of respected scholars, not just those who have spent most of their careers trying to decipher the symbols have voiced strong disagreement (12,13,14). Several have published point-by-point rebuttals (2,3,4,15). "I categorically disagree that the script does not reflect a language," says archaeologist J. Mark Kenoyer of the University of Wisconsin, Madison, who co-directed a dig at the key site of Harappa. "What the heck were they doing if not encoding language?" asks Asko Parpola, who has worked for decades to decipher the signs, adding: "there is no chance it is not a script; this is a fully formed system. It was a phonetic script." Gregory Possehl says that it is not possible to "prove" that the script cannot be deciphered. Massimo Vidale, a well-known archaeologist, notes that the paper (1) “is constructed by repeatedly advancing hypotheses and sometimes wild speculation presented as serious scientific evidence” and concludes by saying: “I see no acceptable scientific demonstration of the non-scriptural nature of the Indus sign system; therefore, I see no collapse of such ‘thesis’” (4).

"Regularities in the frequency and distribution of signs are possible only in a linguistic script," (which apparently exist in the Indus script) says Mahadevan. Wells is more blunt. "He is utterly wrong," he says of Farmer. "There is something you recognize as an epigrapher immediately, such as long linear patterns." As to the brevity of inscriptions, Wells says averages can be misleading. The longer Indus inscriptions, he says, can't be explained as magical symbols. Vinca symbols, for example, rarely are grouped in numbers greater than five. "And you don't get repetitive ordering" as with Indus signs, he adds. "The Indus script is a highly patterned, highly ordered system with a syntax - it just looks too much like writing." Wells also says that a mere 30 signs are used only once, rather than the 1000 Farmer postulates, because many of the "singletons" transform into compound signs used repeatedly.

Parpola agrees with Wells that the pattern of symbols argues for an organized script. "There are a limited number of standardized signs, some repeated hundreds of times - with the same shape, recurring combinations, and regular lines," he says. But Wells and Parpola, like most linguists in the

field, agree on little beyond their opposition to Farmer. Wells rejects Parpola's method of deciphering the signs, and Parpola dismisses Wells's contention that there are significant differences between the signs of upper and lower Indus.

All of them argue that Farmer's thesis is a pessimistic and defeatist approach to a challenging problem. Other scholars believe that the attraction of Farmer's idea has less to do with science than with the long history of decipherment failures. "Some have turned to this idea that it is not writing out of frustration," one of them say.

Each side clearly has far to go to convince its opponents. "I'm not sure the case is strong enough on either side," says linguist Hans Hock of the University of Illinois: "Let each side of the controversy make their case." Yet there already is a retreat from earlier claims that the Indus symbols represent a full-blown writing system and that they encoded speech. Many scholars such as Possehl now acknowledge that the signs likely are dominated by names of places, people, clans, plants, and gods rather than by the narratives found in ancient Sumer or Egypt. They say the script may be more similar to the first stages of writing in those lands. Harvard archaeologist Carl Lamberg-Karlovsky says the meanings of the Indus signs likely are "impenetrable and imponderable" and adds that whether or not the signs are considered writing, they clearly are a form of communication - and that is what really counts. Recent research in Central and South America has highlighted how complex societies prospered without traditional writing, such as the knotted strings or *khipu* of the vast Incan empire while “indecipherable” script have lately been deciphered.

The debate over Indus literacy has political as well as academic consequences. "This will be seen as an attack on the greatness of Indian Civilization - which would be unfortunate," says Shereen Ratnagar, an Indian archaeologist of international repute. "Indologists are at war with the Hindutva polemicists," says statistical linguist Lars Martin Fosse of the University of Oslo, and the issue of the script "is extremely sensitive." As far as Pakistani archaeologists are concerned, they do not seem to be in the foray. Whether the Indus Civilization was a literate polity or an illiterate society, it was still a great civilization, they seem to agree.

Although several stray comments and oblique criticism of Farmer’s thesis, sampled above, have appeared since the publication of the paper by Farmer, Sproate, and Witzel in 2004 (1), it is Asko Parpola who first came in defense of the established position in a major but general paper (2). He took up the full defense in 2008 in a paper (3), which is in effect an enlarged version of the criticism that he presented two years before at Tokyo (2). Another full-scale defense has been offered by Massimo Vidale (4), who has for long worked in the Indus Valley and is a well-known archaeologists of the Harappan Civilization. A third line of defense has been offered most recently by a group of statisticians, headed by Rajesh Rao. We give some excerpts from this critique in the followings; first by Parpola and then by Vidale. We follow it up with the statistical arguments of Rao et al.

The Principal Arguments of Farmer et al: The principal arguments of Farmer et al. for their drastic conclusion are the following: “Indus inscriptions were neither able nor intended to encode detailed ‘messages’, not even in the approximate ways performed by formal mnemonic systems in other nonliterate societies” because they are too short - on the average only five signs long. And because they contain too many rare signs - between 25 to 50 per cent of the around 400–600 different signs are attested only once. Moreover, they miss the kind of sign repetition evidenced in the Egyptian cartouches: “Most importantly, nowhere in Indus inscriptions do we find convincing evidence of the

random-looking types of sign repetition expected in contemporary phonetic or semi-phonetic scripts".

Farmer and his colleagues present ten main points or theses, which according to them prove that the Indus script is not writing:
1. Statistics of Indus sign frequencies & repetitions.
2.Texts too short to encode messages.
3. Too many rare signs, especially "singletons" 4. No sign repetition within any one text
5."Lost" longer texts (manuscripts) never existed. 6.No cursive variant of the script developed,

hence no scribes
7.No written equipment has been found
8."Script" signs are nonlinguistic symbols
9.Writing was known, but it was consciously not adopted
10.This new thesis helps to understand the Indus Civilization better than the writing hypothesis.
Parpola's Cricism: Parpola takes up these points for discussion, one by one (2,3).

Statistics of Indus sign frequencies & repetitions: Firstly, Farmer and his colleagues claim that comparison of the Indus sign frequencies with that of Chinese can show that the Indus system could not have been a Chinese-style script, since symbol frequencies in the two systems differ too widely, and the total numbers of Indus symbols are too few (1). They also point out that signs are repeated within a single inscription much more often in Egyptian cartouches than in Indus seals of a similar length. There is no difficulty to agree with these observations. There is a vast difference between the Chinese script with its theoretically nearly 50,000 signs (and even in practice about 5000 signs) and the Indus script with only about 400 known graphemes.

This is an important point but Farmer et al. themselves conclude that "... studies of general sign frequencies by themselves cannot determine whether the Indus system was a mixed linguistic script [that is, a logo-syllabic script of the Sumerian type]... or exclusively a system of nonlinguistic signs" (1). Experts, such as Koskenniemi, the professor of Computer Linguistics at the University of Helsinki, agree that plain statistical tests such as the distribution of sign frequencies and plain recurrences can neither prove that the signs represent writing, nor prove that the signs do not represent writing. Falsifying being equally impossible as proving. Incidentally, Farmer et al. were recently given a taste of their own statistical argument by Rajesh Rao and his associates who used some advanced statistical manipulations to "prove" that the Indus symbols were indeed a writing system (5).

Texts too Short to Encode Messages: The second argument of Farmer and his colleagues is that "Indus inscriptions were neither capable nor intended to encode detailed messages, not even in the approximate ways performed by formal mnemonic systems in other nonliterate societies" (1). One of the two reasons adduced in support of this thesis is that Indus inscriptions are too short. But although the Indus texts have as their average length five signs, this is quite sufficient to express short noun phrases in a logo-syllabic script of the Sumerian type. We cannot expect complete sentences in seals and other types of objects preserved (19). But even written noun phrases qualify as language-based script; in early logo-syllabic scripts one sign often stands for a complete word. Even a seal with a single sign can express its owner. Furthermore, there is mostly little reason for sign repetition in short seal texts written in an early logo-syllabic script of the Sumerian type.

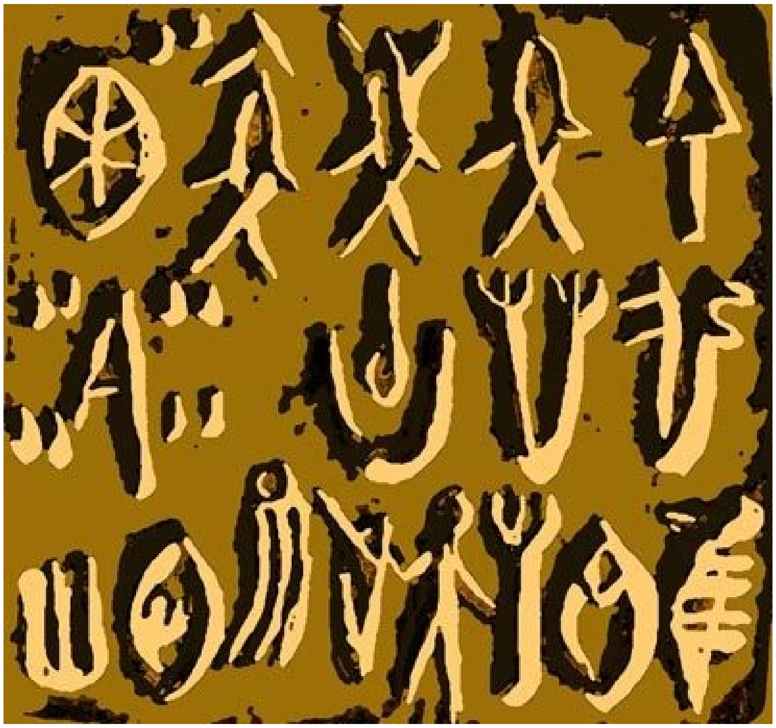
The Mesopotamian seal inscriptions typically contain: a proper name ± descent ± occupation. In the most elaborate seals of the high officials, this information is couched in an invocation addressed to the King or other dignitary. Here are two examples of Mesopotamian seal inscriptions: “Adda the Scribe”, “O Shatkali-sharri, King of Akkad; Ibn-sharri the scribe your servant”. These Akkadian seals are contemporary with the heyday of the Indus Civilization. The single-sign seal inscription H-94 from Harappa probably renders the occupational title of the seal owner. Single-sign texts may consist of non-composite signs, but here this single sign is a composite sign consisting of two component signs. Many composite signs (like the one in the text H-94) have ‘man‘ as the final component and may denote occupational titles such as ‘policeman‘ or milkman. The Egyptian script around 3000 BC was used in a number of inscriptions, most of which were very short, often consisting of just two or three signs. They recorded proper names with a high percentage of rebus signs and thus qualify as writing.

Too Many Rare Signs: the “Singletons: The third argument of Farmer and his colleagues has been put into words as follows: “Further evidence that clashes with the Indus-script thesis shows up in the large number of unique symbol (or “singletons”) and other rare signs that turn up in the inscriptions ... A number of inscriptions also contain more than one singleton in addition to other rare signs, making it difficult to imagine how those signs could have possibly functioned in a widely disseminated script” (1).

It is true that around 25% of the about 400 graphemes of the Indus script are attested only once. But if more texts are excavated, many of these singletons will occur more than once; there will also be new rare signs. Many of the Indus singletons occur in the midst of more frequently occurring signs, which helps their understanding. All logo-syllabic scripts had rarely occurring signs, some of these scripts quite many. Chinese has very many rare signs, and some of them do occasionally occur even in newspapers.

No “Random-Looking” Sign Repetitions Within any One Text: Although Farmer and his colleagues in passing refer to logosyllabic writing systems of the Sumerian type and their functioning, their argumentation implies that in order to represent a language-based script the Indus signs should largely be phoneticized in the manner of the Egyptian cartouches. However, in early logosyllabic scripts one sign often stands for a complete word. Even a seal with a single sign can express its owner, and there is mostly little reason for sign repetition in short seal texts written in an early logosyllabic script of the Sumerian type. The alleged lack of what they call random-looking type of sign repetition is mentioned as the fourth and most important and critical evidence against the thesis that the Indus script is a writing system. Most importantly, nowhere in Indus inscriptions do we find convincing evidence of the randomlooking types of sign repetition expected in contemporary phonetic or semi-phonic scripts” (1).

But sign repetition within single Indus inscription *does* occur, also of the “random-looking type" completely missed by Farmer and his colleagues. Such repetition occurs even in the barseals, which Farmer and his colleagues consider particularly crucial for the Indus script thesis. Parpola lists several examples, such as seals M-682, M-634, M-1792, K-10,M-1169, M-357, etc., where sign repetition does occur, also repetition of the type so vociferously missed by Farmer et al.



Indus seal M-314 with inscription containing 17 symbols, the longest continuous inscription to date on any object

Farmer and his colleagues themselves admit that “some Indus signs do repeat in single inscriptions, sometimes including many repetitions in a row”. However, they do not accept the evidence of such duplications: “Whatever the origins of these different types of duplications, all that is critical for our purposes is to note again the lack of any suggestions in them of the random-looking repetitions typical even of monumental scripts like Luwian or Egyptian hieroglyphs‖ (6).

Farmer and his colleagues (1) surmise that the duplication of signs in a row may emphasize their magical or political power. They do not mention that such sign reduplications can reflect emphasizing linguistic reduplications common in Dravidian and other Pakistani and Indian languages, especially in onomatopoeic words, or as grammatical markers, such as Sumerian nominal plurals. A common example of duplication of the same word in Urdu is the use of “very, very” as the point of emphasis.

“Lost” Longer Texts (Manuscripts) Never Existed: All literary civilizations produced longer texts but there are none from the Indus Valley - hence the Indus script is no writing system:

Farmer and his colleagues reject the much repeated early assumption that longer texts may have been written on “birch bark, palm leaves, parchment, wood, or cotton cloth, any of which would have perished in the course of ages, as suggested by Sir John Marshall in 1931. Farmer and his colleagues are ready to believe the “Indus script thesis” only if an Indus text at least 50 signs long is found.

But, even though Farmer and his colleagues speak as if our present corpus of texts was everything there ever existed, this is not the case. More than 2100 Indus texts come from Mohenjo-daro alone, and yet less than one tenth of that single city has been excavated. Farmer and his colleagues do not know what has existed and what may be found in the remaining parts of the city, even if it is likely that only imperishable material of the kinds already available continue to be found. The Rongo-Rongo tablets of Easter Island are much longer than 50 signs. But does this make it certain that they represent

writing in the strict sense?

Seed evidence shows that cotton has been cultivated in Greater Indus Valley since Chalcolithic times, and cotton cloth is supposed to have been one of the main export item of the Harappans. Yet all the millions of Harappan pieces of cotton cloth have disappeared for climatic reasons, save four cases where a few microscopic fibers have been preserved in association with metal (6). Alexander's admiral mentions "thickly woven cloth" used for writing letters in the Indus Valley *ca*. 325 BC. Sanskrit sources such as the Yajñavalkya-Smrti also mention cotton cloth as writing material around the beginning of the Christian era. But the earliest preserved examples date from the 13th century AD (7,8).

Emperor Asoka had long inscriptions carved on stone (pillars and rocks) all around his wide realm in 260 to 250 BC. They have survived. But also manuscript on perishable materials must have existed in Ashoka's times. This is suggested among other things by the mention of lipi 'script' in Panini's Sanskrit Grammer which is dated to around 400-350 BC. BC. Sanskrit lipi comes from Old Persian dipi. The earliest surviving manuscripts on birch bark, palm leaves and wooden blocks date from the 2nd century AD and come from the dry climate of Central Asia (7,8). We can conclude that manuscripts on perishable materials have almost certainly existed in South Asia



H-94 Seal from Harappa

during 600 years from the start of the Persian rule onwards, but they have not been preserved; this period of 600 years with no surviving manuscripts corresponds to the duration of the Indus Civilization.

No Cursive Variant of the Indus Script Developed - Hence No Scribes: The sixth argument of Farmer and his colleagues is based on the observation that everywhere scribes writing manuscripts tended to develop a cursive style. From the fact that the Indus script changed very little during its 600 years of existence they conclude that there were no longer texts nor any scribes.

But the Egyptian hieroglyphs preserved their monumental pictographic shapes for 3000 years.The Egyptian cursive hieratic style of papyrus manuscripts does not differ so very much from the monumental hieroglyphs. The difference between Maya manuscripts and monumental inscriptions is not all that great, either.

No Writing Equipment has been Found: No writing equipment has been found, hence Farmer and his colleagues conclude that there were no scribes nor any manuscripts (1). They discredit four respected Indus archaeologists - Ernest Mackay, George Dales, Masatoshi Konishi and B. B. Lal - who have interpreted some finds as writing equipment, because these interpretations “are no longer accepted by any active researchers”. Konishi’s paper was published in 1987 and B. B. Lal wrote as recently as 2002.

But, thin metal rods, such as used in South India to incise palm leaf manuscripts, could have early on corroded away or beyond recognition. From painted Indus texts on Harappan pots and bangles we know that Indus people used brushes to write, although such brushes have not survived or have not been recognized.

The Indus "Script" Signs are Actually nonLinguistic Symbols: Instead of a language-based writing system, Farmer and his colleagues (1) see in the Indus signs “a relatively simple system of religious-political signs that would be interpreted in any language”. The nonlinguistic symbols of Mesopotamian iconography are said to be a particularly close and relevant parallel, as they may be arranged in regular rows with a definite order like the Indus signs.

But, in Mesopotamian seal iconography, the non-linguistic symbols usually occur as isolated signs, for instance near the gods they belong to. Arranged in longer rows and with a definite order they occur only in very limited contexts: mainly on stelae and boundary stones (kudurru) between 1600 and 600 BC. Mesopotamia was a literate civilization, and the symbols on the boundary stones followed the order of divinities in curse formulae written down in cuneiform texts - the symbols represented deities invoked to protect the boundary stone (9).

Why Did the Harappans not Adopt Writing?: Finally, Farmer and his colleagues ask them

selves: “The critical question remains of why the Harappans never adopted writing, since their trade classes and presumably their ruling elite were undoubtedly aware of it through their centuries of contact with the high-literate Mesopotamians”. Their answer is that the Harappans intentionally rejected writing for some such reason as the Celtic priests of Roman times: for the druids were averse to encode their ritual traditions in writing like the Vedic Brahmins of India (1).

But it is not likely that the Harappans would have rejected writing for such a reason because: adopting writing did not oblige them to divulge their secret texts, which could be guarded in an esoteric oral tradition. In any case literacy must have been fairly restricted. Even in Mesopotamia literary texts were written down only long after the invention of writing. It is true that some complex societies did prosper without writing - the Incan empire for example used instead a complex communication system of knotted strings. But writing does offer advantages not easily discarded.

We can indeed ask a counter question: Why was the Indus script created? In Parpola’s opinion, for economic and administrative reasons, like the Archaic Sumerian script. This is strongly suggested by the fact that the majority of the surviving texts are seal stamps and seal impressions quite clearly used

in trade and administration. But proper judgement requires acquaintance with the evolution of the Indus Civilization.

The new thesis helps to understand the Indus Civilization better than the writing hypothesis: As to the very last point raised, and claim made, by Farmer and his colleagues in their 2004 paper, it is honestly hard to understand how the hypothesis that the Indus signs are nonlinguistic symbols helps us to understand the Indus Civilization much better than the hypothesis that the Indus script is a logo-syllabic writing system. In a logosyllabic script the signs may denote what they depict, or they may be used as rebuses. Before we can even start pondering their use as rebuses, we must clear up their iconic meaning. This necessary first step is identical with the efforts of Farmer and others to understand the Indus symbols as pictograms.

Is the Indus script writing or not? So is the Indus script writing or not? Purple concludes: “We have seen that all evidence adduced by Farmer and his colleagues is inconclusive: none of it can prove their thesis that the Indus script is not writing but only nonlinguistic symbols, a relatively simple system of religious-political signs that could be interpreted in any language”.

The question requires the consideration of some further issues. One of these is the fact that nonlinguistic symbol systems (potter‘s marks and iconographic symbols) existed as early as since 3300 BC not only in northern Indus Valley but also in Baluchistan, Seistan & Kerman on the Iranian Plateau and in southern Turkmenistan, a circumstance not mentioned by Farmer and his colleagues (4).

In contrast to these relatively simple systems of nonlinguistic pot-marks, the Indus script has a great number of different signs, around 400, and they have been highly standardized. Moreover, the signs are usually neatly written in lines, as is usual in language-bound scripts. The normal direction of writing is from right to left; this is the direction of the impressions made with seal stamps, which were carved in mirror image. Occasionally the seal-carver ran out of space, and in such cases he cramped the signs at the end of the line to preserve the linear order.

But the most important characteristic of the Indus texts from the point of view of speechencoding becomes evident if we do not limit the observation of sign repetition to single inscriptions as Farmer and his colleagues do. The fact is that the Indus signs form a very large number of regularly repeated sequences. For example, sequence of the three last signs in the seals M-66 and M-12 occurs in Indus inscriptions about 100 times, mostly at the end of the text. The order of these three signs is always the same, and this sequence is recorded from nine different sites, including two outside South Asia, one in Turkmenistan and one in Iraq. If the Indus signs are just nonlinguistic symbols as Farmer and his colleagues maintain, for what reason are they always written in a definite order, and how did the Indus people in so many different places know in which order the symbols had to be written? Parpola asks. Did they keep separate lists to check the order? And one should note that there are hundreds of regular sequences that occur several times in the texts.

The text of eleven signs written on top of the table below can be broken into smaller sequences all of which recur at several sites. As this small example shows, the texts even otherwise have a regular structure similar to linguistic phrases. The Indus signs do not occur haphazardly but follow strict rules. Some signs are usually limited to the end of the text, and even when such a sign occurs in the middle of an inscription, it usually ends a recurring sequence. Some other signs are limited to the beginning of the text, but may under certain conditions appear also in other positions.

Farmer and his colleagues claim that the Indus script is a system of nonlinguistic symbols that can be understood in any language. They suggest that it belongs to the category which Andrew Robinson (10) proposes to call “protowriting”, and to which he assigns Ice Age cave art, Amerindian pictograms, many modern road signs, mathematical and scientific symbols and musical notation. The speech-bound scripts or in Robinson‘s terms - full writing - came into being with the phonetization of written symbols by means of the rebus or picture puzzle principle.

Let us consider the rebus principle utilized in logo-syllabic scripts. Most signs were originally pictures denoting the objects or ideas they represented. But abstract concepts such as ’life‘ would be difficult to express pictorially. Therefore the meaning of a pictogram or ideogram was extended from the word for the depicted object to comprise all its homophones. For example, in the Sumerian script the drawing of an arrow meant 'arrow', but in addition 'life' and 'rib', because all three words were pronounced alike in the Sumerian language, namely *ti*. Homophony must have played a role in folklore long before it was utilized in writing. The pun between the Sumerian words *ti* 'rib' and *ti* 'life' figures in the Sumerian paradise myth, in which the rib of the sick and dying water god Enki is healed by the Mistress of Life, Nin-ti. But the Biblical myth of Eve's creation out of Adam's rib no more makes sense because the original pun has been lost in translation: *rib‘* in Hebrew is *Sela:c* and has no connection with Eve's Hebrew name *H‘awwa:*, which is explained in the Bible to mean mother of all living. The point is that homophony usually is very languagespecific, and rebuses therefore enable language identification and phonetic decipherment.

Since the appearance of Parpola’s criticism in 2005 (2), Farmer and his colleagues have underlined that the rebus principle is occasionally used also in symbol systems not so tightly bound to language. As an example they mention the use of rebus puns to express proper names in the otherwise clearly nonlinguistic communication system of heraldry. But by definition any ancient or modern symbol system which consciously uses rebuses and which therefore at least partially can be read phonetically counts as full writing.

The Egyptian script around 3100-3000 BC was used in a number of very short inscriptions, often consisting of just two signs, which recorded proper names but with a very high percentage of the signs used as rebuses . The famous palette of King Narmer with an inscription already quoted above is a good example. This is definitely already a writing system, even if the texts are on average shorter than the Indus texts! Here two rebus signs express the proper name of King Narmer, whose feats are related in a nonlinguistic way in the pictures taking up the rest of the palette, yet with many formalized conventions. This is fully parallel to the use of rebus symbols to express proper names in the nonlinguistic communication system of heraldry or coats of arms.

Rebuttal from Massimo Vidale : Massimo Vidale’s response (4) to Farmer et al. is quite rigorous and passionate. It is a lengthy criticism; in the followings, we attempt to reproduce (with limited paraphrasing) a few relevant paragraphs.

Brevity of the Inscriptions: On page 19, note 2 of the principal exposition of Farmer et al. (1) we read: “...... The Indus system cannot be categorized as a script even under [....] broad definition of the term, since the brevity of the inscriptions alone suggests that they were no more capable of performing extensive mnemonic or accounting functions than of systematically encoding speech”.

Simply stated, for the authors there is no way that short inscriptions express language. This article of faith is an enormous point, because at the end of the paper it resurfaces in a more articulated way.

Here the authors lay down five possible conditions for accepting a possible refutation of their ideas, namely,
1) the find of inscriptions including several hundred signs;

2) Inscriptions of at least 50 symbols with random sign duplication;
3) Bilingual inscriptions with double texts of at least 30 signs (curious, why 30 and not 20 or 25?);
4) Independent testing and validation of decipherment rules across significant bodies of Indus inscriptions,
5) Lexical lists of Near Eastern types.

With the exception of the obvious condition 4, the other strictly depend upon the chance of finding long texts. At this point, the authors could include the existence of monumental inscriptions on rock with royal genealogies crossing not less than a dozen generations, or the precise location on the National Library of Mohenjo-daro. Archaeological evidence, so far, has indicated that such finds are equally improbable. Everybody knows that the Indus script did not work that way. Still, we see no historical reason for excluding the actual possibility that the Indus Civilization was "...the only known literate society of the world, ancient or modern, that did not produce texts of significant length on durable materials" (1).

At page 23 the authors consider the use of potsherds as a writing medium across different ancient cultures. They assume, again, that the brevity of Indus texts on vessels rules against their scriptural nature, because ancient civilization wrote on potsherds "medium-sized (and often quite long) texts" (1). Wrong statement. Length of texts has more to do with the scripts' contexts of use than with cultural attitudes; nor the length of a text is linearly correlated to its potential information. If it is true that in Egypt inscriptions on potsherds might have been long, this is not true for classical Greece, reportedly a literate civilization. Here, for example, the specialized function of exiling a citizen was performed by the means of quite short isolated inscriptions, in the range or in the


Details of inscription on M-66

average sign number of the Indus ones, reporting the name of the condemed. On Greek ceramics one can encounter even shorter inscriptions, in the range or in the average sign number of the Indus ones, reporting the name owner, of the painter or potter, definition of vessels form, their market price, and dedication to *amasioi* or lovers. On early Christian pottery lamps and vessels one may see inscriptions of few characters, sometimes compounded, that, although having strong symbolic meanings, could also be easily read and phonetically pronounced. An inscription of three characters incised on an Indus shipping jar, although short, might have conveyed as well in its functional contexts substantial information or key instructions. Farmer, Sproat and Witzel do not think like archaeologists, and therefore completely miss in handling their view of the past the many fold implications of contextual meanings.

The authors also indulge in defining the Indus signs appearing on pottery as "... Oversized symbols that few naive observers would be tempted to classify as writing ...." and express the remarkable revolutionary opinion that such signs represented deities to whom the vessels' content were dedicated. What an amazing finding!

This arbitrary, short-sighted view or prejudice against short inscriptions is really hard to understand. The early pictographic accounting tablets from Uruk may be as short as the texts of the Indus seals or those incised on some types of Indus vessels. Associated or not to speech, would the authors deny their status as early writing? We all know that inscriptions on Near Eastern cylinder seals, in the second half of the third millennium BC are frequently as long as the Indus ones, and nonetheless the short texts combine themselves with the iconography to convey some important messages about the identity of the bearer. The common assumption that the Indus texts, too, may report a combination of pictographic and syllabic signs, perhaps expressing - together with the standardized animal icons that figure below the inscription in the standard steatite stamp seals
- a system of social coordinates, attributions or functions and names stands unthreatened, as it remains compatible with the length of the sequences.

Writing on Perishable Materials: Given the different materials on which Indus craftspeople left inscriptions, they also wrote on perishable materials is quite likely. Preservation of materials as



Indus signs occur in strictly ordered sequences that recur at many different sites (3).

wood, bark, leather, cloth, or palm leaves in the Indus Valley is demonstrably very poor. On the other hand, that Indus people wrote on organic materials long texts, in light of the inscriptions we know, appears very unlikely. Thus, we may expect, in future, to discover some short unreadable sequences on perishable media, but probably nothing more substantial. This is all one can confidently say on the subject.

The authors take two and one half pages to review the history of what they call " The lost manuscript thesis". They depict a picture where all the scholars of the past were convinced of the existence in the Indus Civilization of large archives of long manuscripts on perishable supports, until some papers by Farmer, Sproat, Withal and others, starting from 1998, unexpectedly and bravely challenged this 'thesis'. Such a posterior reconstruction might appear attractive to readers not accustomed to Indus archaeology and, above all, evidently gratifies the authors, but the possible existence of such documents was traditionally mentioned in archaeological field as a *possibility*, and not *certainty* or an established belief. Students in archaeology are warned, in their first year classes, of the deep inconsistency of arguments *ex-absentia*, and the commonplace of referring to possible lost manuscripts was more like crossing fingers than real hope.

On the Concept of 'Literacy' in Early State Societies: The authors have a clear attitude at knocking down walls even where there are readily available unlocked doors. That archaeologists have accepted the Indus script as comparable to the writing systems of Sumer and Egypt for them is ".....an incontrovertible historical fact'. After reading their paper, many readers would be surprised to discover that "...the standard view that the Indus Civilization was literate has been an assumption and not a conclusion of previous studies. Practically speaking, everybody knows that this view has been and still is an assumption; but for the moment being it is also the prevalent, most likely archaeological hypothesis". But, do the authors provide a reliable different perspective?

Their goal, openly stated at the very beginning, is to destroy the image of a literate Indus valley, to dismiss the idea that this civilization was the largest literate society in the early ancient world, and consequently to question the importance of the Indus script. Writing in the Indus centers was evidently restricted to a particular social group and to a set of specialized functions, and this certainly does not imply a large literate society. In Shang China (2nd millennium BC), writing was esoteric knowledge belonging to small groups of professional scribes and religious specialists, whose function was to ask the supernatural powers for prophecies and suggestions about the king's and state's decisions. While oracle bones played an important role in Shang's politics, and have indirectly revealed a huge amount of historical information, there is no evidence that literacy played any function in administrating the state's economy or purposefully recording history, political propaganda and the like. Shang society, besides the narrow context of oracle bones rituals in a room of the king's palace, was a completely non-literate one. Although nobody might have seriously proposed that the use of writing in an early protohistorical society such as the Indus Civilization did make a 'large literate society', the authors start their paper by building an artificial image of the opponents' views, ascribing to them extensions that only fit the needs of their easiest and more opportunistic criticism.

Positional Regularities and Nonlinguistic Symbolic Systems in the 3rd Millennium BC: Farmer, Sproat and Witzel review the long history of failures of the many attempts at decipherment - on the basis of Dravidian or Indo-Aryan hypothesis. It is well-known that both the Russian and the Finnish attempts at decipherment were based on the discovery of some statistical regularities in sign position. The authors know they cannot deny this evidence, but dismiss these regularities as meaningless. Because

"... Statistical regularities in sign positions show up in nearly all symbol systems, not just those that encode speech.... We also find that such regularities are similar to those seen in "countless nonlinguistic sign systems" (1).

Among such countless examples, according to the authors, would range Near Eastern emblem systems of the second millennium BC, and modern highway and airport signs. The other nonlinguistic sign systems later quoted by the authors are Scottish heraldic blazons and the Chalcolithic Vinca inscriptions in southeastern Europe. No example from third millennium BC South Asia is taken into account. The basic problem lies with the nature of the examples they selected. The Indus signs or symbols should be compared in the first place with contemporary presumably nonlinguistic graphic sign systems of the same general geographic and cultural areas, i.e. Central and South Asia, rather than with cases distant in space and time. As a matter of fact, archaeologists painstakingly collected in the last three decades, some systematic archives of nonlinguistic symbols coming from the Iranian Siestasn and Kerman, Turkmenistan and the Pashtun country of Pakistan. These are the so-called 'potter's marks' notations encountered on ceramics respectively at Shah-e-Sokhta, Tepe Yahoo, Rehman Dheri, Shahdad and Mehrgarh-Nausharo. To these systems one may also add the series of marks found by soviet archaeologists incised on the female terracotta statuettes at the site of Alton-Depe, Namazga-Depe and other sites, interpreted as symbols of specific divinities and therefore possibly relevant to part of the present discussion. If we consider these data up close, we do not observe much of positional regularity, claimed by the authors.

Sproat (17) says that no one has done the "legwork" of putting together a large data set of ancient nonlinguistic systems. This ignores the work of Vidale (4), who did put together a set of ten such systems. Vidale questions the relevance of the nonlinguistic systems suggested by Sproat and colleagues because they are neither of the same time period nor from the same geographical region as the Indus script (see above). To rectify this oversight, Vidale lists ten nonlinguistic systems from Central and South Asia that were roughly contemporaneous with the Indus script. For this set of much more relevant nonlinguistic systems, Vidale demonstrates that the average number of different signs is only about 44, a far cry from the 400 or so signs in the Indus script.

Directionality in the Indus Inscriptions: That Indus inscription were normally read from right to left, in the case of longer texts with superimposed lines, from lefty to right, cannot be denied. Directionality follows positional regularities and fall, too. Obviously, directionality alone does not make a script, but together with positional regularities, it shows that the Indus script was a structured and standardized system. Without much confidence, Farmer and associates try to dismiss directionality by defining it solely in terms of carving: " The fact that Indus inscriptions tended to incised in one directions or another, which is predictable output of workshop habits, does not mean that they were meant to be 'read' in a fixed direction". Actually, this closely depend upon an important unanswered question: did the carver masters understand the signs, or did they copy in the workshops inscriptions traced by professional scribes on steatite or other media? Unfortunately, we do not know. For the moment being, anyhow, directionality in writing reasonably hints to directionality in reading.

Dominance of High Frequency Signs: "All major studies agree that a small number of symbols dominate in Indus inscriptions. Just four of the 417 signs account for 21% of the 13,372 sign occurrences in Mahadevan's concordance; eight signs make up 31 %; and twenty signs over 50%" (1). Unfortunately these statistics are not presented in greater detail in the paper, in spite of its considerable length. The authors present a graph, reproduced below, where on the x-axis individual

signs in Mahadevan's concordance and a catalogue independently drafted by Wells was separately plotted in ascending order of frequency (from 0 to 600 and more), while on the Y-axis we see the relative cumulative percentage contribution. The Indus samples are accompanied in the graph by six Sumerian texts, four hieroglyphic texts, a selection of Chinese newspaper stories, and a selection of newspaper headlines from the same source.

The Indus signs, Egyptian and Sumerian cuneiform writing nearly overlap in the same skewed curve, i.e. Share the same dominance of few high frequency signs combined with many lowfrequency ones. Chines headlines and Chinese news texts have a much smoother trend. At any rate, as it now turns out that studies of general sign frequencies cannot reliabely distinguish scripts from non-scripts and therefore are useless.

Low Sign-repetition Rates in Indus Inscriptions: According to Farmer and associates, 10 of the 20 highest frequency signs in Indus inscriptions do not repeat themselves, or repeat very little, across the whole corpus of Mahadevan (1905 inscriptions). The authors then admit that "In many ancient scripts, some high frequency signs can be expected to show up only once in certain types of short inscriptions: in seals inscriptions or name lists, this is true of gender determinatives and whole-word signs standing for titles or divine names incorporated in human names". If the counts of Farmer and others are correct, this is possibly what might happen in a good part of the Indus seal texts.

Table Turned - The Entry of Rajesh Rao and Associates in the Foray: Farmer and his colleagues largely make their point on statistical ground and some of their conclusions have really thought provoking. The same tool has recently been used to disprove their theory, almost with the same credibility and vigor. A team of computer specialists, headed by Rajesh Rao assessed the script samples using what is called "conditional entropy". When aimed at language, this statistical technique comes up with a measure for the "orderliness" of words, letters or characters – from totally ordered to utterly random. "If you look at strings that contain words, then you should see that for any particular word in the string there is going to be some amount of flexibility in choosing the next word, but they're not randomly ordered," Rao says. For instance, in English text, if you find the fragment "The boy went to the", there is some flexibility in what follows. Nouns like "park" and "circus" make sense, but a verb such as "eat" does not.

Rao's team applied this analysis to Indus script, Sanskrit, an ancient south Indian language called Old Tamil, and English. They also tested the conditional entropy of the Fortran computer programming language and non-languages, including DNA and protein sequences. Indus script characters turned out to be about as randomly ordered as the other languages. Unsurprisingly, they proved less random than DNA or protein sequences and more random than the computer language, where unambiguity is essential.

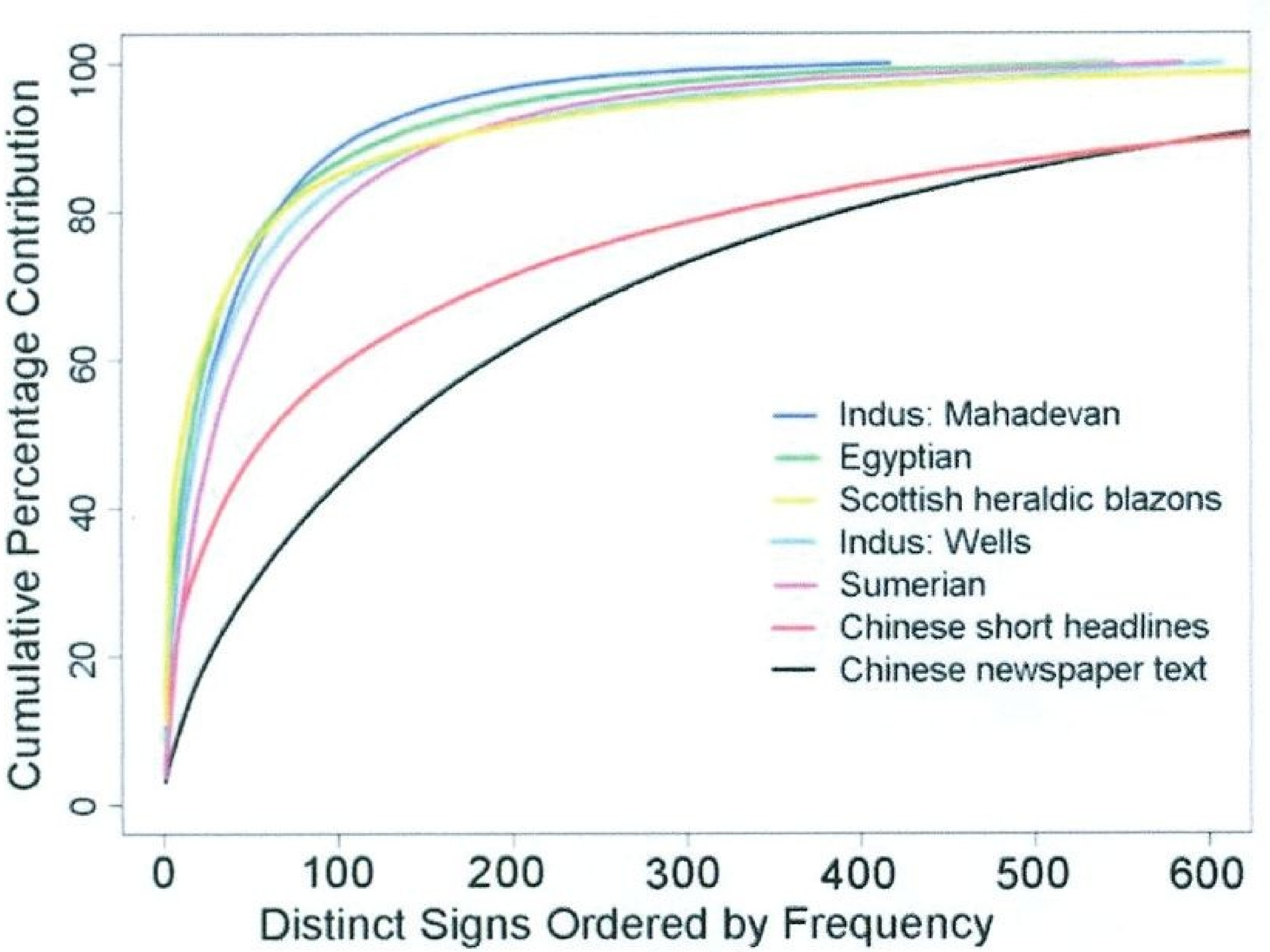
The Indus texts are linearly written, like the vast majority of linguistic scripts (and unlike nonlinguistic systems such as medieval heraldry or traffic signs); Indus symbols are often modified by the addition of specific sets of marks over, around, or inside a symbol. Multiple symbols are sometimes combined ("ligatured") to form a single

glyph. The script obeys the Zipf-Mandelbrot law, a power-law distribution on ranked data, which is often considered a necessary (though not sufficient) condition for language; The script exhibits rich syntactic structure such as the clear presence of beginners and enders, preferences of symbol clusters for particular positions within texts etc., not unlike linguistic sequences; Indus texts that have been

discovered in Mesopotamia and the Persian Gulf use the same signs as texts found in the Indus region but *alter their ordering*. These "foreign" texts have low likelihood values compared to Indus region texts, suggesting that the script was versatile enough to represent different particular positions within texts, similar to linguistic sequences:

- the script obeys the Zipf-Mandelbrot law, a power-law distribution on ranked data, which is often considered a necessary (though not sufficient) condition for language; and
- texts found in Mesopotamia and the Persian Gulf use the same signs as texts found in the Indus region but alter their ordering, suggesting that the script was versatile enough to represent different subject matter or a different language.

Such attributes are hard to reconcile with the thesis that the script merely represents religious or political symbols.



Cumulative frequencies of signs in various linguistic and non-linguistic corpoa. The horizontal axis represents distinct signs ordered by decreasing frequency. The vertical axis represents the contribution of all signs up to a given rank.

subject matter or a different language in foreign regions.

Given that the Indus script shares certain properties with linguistic scripts, Rajesh Rao and his team came to the conclusion that the similarity in conditional entropy of the Indus script to other natural languages provides strong evidence in favor of the linguistic hypothesis. In their view, several key features of the Indus script suggest that it represents language:

- the texts are usually linear, like the vast majority of linguistic scripts and unlike nonlinguistic systems such as heraldry or traffic signs;
- symbols are modified by the addition of specific sets of marks over, around, or inside a symbol, much like later Indian scripts that use such marks to modify the sound of a root consonant or vowel symbol;
- the script possesses rich syntactic structure, with particular signs or clusters of signs preferring using entropy.

Rajesh Rao's paper has been as vigorously criticized as it has been promoted. The findings "are of little interest and get us nowhere particularly new," says Meadow. Farmer and his colleagues made stronger critiques, calling comparative data sets Rao used "invented data." There are also purely scientific critiques of the paper. Numerous nonlinguistic systems, from musical notation to Inca khipu knots, can display the same properties, and Rao and his colleagues didn't compare the Indus to real-world examples. Furthermore, similar results can be demonstrated using made-up alphabets that have language-like frequencies but no actual structure. "It's surprising the technical part of the team didn't see that," says Mark Liberman, a computational linguist at the University of Pennsylvania who does not study the Indus but has followed the debate. "I think their Science paper is more than a little mis

Further evidence for the Indus script's linguistic nature comes from quantitative studies comparing the entropy of the Indus texts with that of various languages. In some systems, such as the Vincˇa system, the signs do not seem to follow any order and appear to be juxtaposed randomly. Other nonlinguistic systems, such as deities carved on Mesopotamian boundary stones, exhibit a rigid order reflecting, for example, the hierarchical order of the deities. In languages, on the other hand, sequences of words and characters exhibit a degree of order intermediate between random and rigid. This intermediate degree of randomness arises from the grammatical rules and morphological structure of languages. The degree of randomness in a sequence can be measured quantitatively

leading on that score." Online, academic exchanges over the merits of the paper quickly descended into accusations of garbage research, cultural blindness, and willful ignorance.

The second of the papers (11) has fared better, though Farmer still calls it a "mathematical smokescreen." In it, Rao and his colleagues applied a statistical technique called a Markov model (used in a variety of fields, from facial recognition to DNA analysis) to determine how often pairs of Indus symbols appear together, and again claimed that the script is language like. The study quantified the long-observed general structure of the script, and opened up possibilities for interesting applications, but was still cited for over interpretation because the structure alone is not proof of language. In the following we attempt to decipher the arguments of Rajesh Rao and his team:

Rao's statistical results are plotted in the Figure above, where normalized block entropy is plotted against the sequence length (block size) of the notational systems compared (for methodical details, refer to ref.5). As seen in Figure (b), the block entropies of the Indus texts remain close to those of a variety of natural languages and far from the entropies for unordered and rigidly ordered sequences.

Does the similarity in block entropies with linguistic systems in Figure (b) prove that the Indus script is linguistic? Rao et al. do not believe so. In fact, they contend that barring a full decipherment, one cannot prove either the linguistic or nonlinguistic thesis, unlike Sproat and colleagues who have claimed to have “proof” for the nonlinguistic hypothesis (1,16). What they do claim, is that results such as the similarity in entropy in Figure (b) increase the evidence for the linguistic hypothesis, given other language-like properties of the Indus script. Rao et al. compare some of the statistical properties of Indus inscriptions and come to the following conclusions in favor of its nature as script:

• *Linearity:* The Indus texts are linearly written, like the vast majority of linguistic scripts (and unlike nonlinguistic systems such as medieval heraldry).

• Directionality: There is clear evidence for directionality in the script: texts were unsually written from right to left. Directionality is a universal characteristic of linguistic systems but not necessarily of nonlinguistic systems.

• *Use of Diacritical Marks:* Indus symbols are often modified by the addition of specific sets of marks over, around, or inside a symbol. Multiple symbols are sometimes combined (“ligatured”) to form a single glyph. This is similar to linguistic scripts, including later South Asian scripts which use such ligatures and diacriticical marks above or below a symbol to modify the sound of a root consonant or vowel.

• *Zipf-Mandelbrot Law:* The script obeys the ZipfMandelbrot law, a power law distribution on ranked data, which is often considered a necessary (though not sufficient) condition for language.

• Syntactic Structure: The script exhibits distinct language-like syntactic structure including equivalence classes of symbols with respect to positional preference, classes of symbols that function as beginners and ends, symbol clusters that prefer particular positions within texts, etc. This structure is evident in both short texts as well as longer texts that are up to 17 symbols long.

• *Diverse Usage:* The script was used on a wide range of media, suggesting a diverse usage similar to linguistic scripts, and unlike nonlin



(a) Examples of the Indus script. Three square stamp seals, each with an Indus text at the top. Last image: three rectangular seals and three miniature tablets with inscriptions (image credit: J. M. Kenoyer/Harappa.com). (b) Block entropy scaling of the Indus script compared to natural languages and other sequences. Symbols were signs for the Indus script; bases for DNA; amino acids for proteins; change in pitch for music; characters for English; words for English, Tagalog, and Fortran; symbols in abugida (alphasyllabic) scripts for Tamil and Sanskrit; and symbols in the cuneiform script for Sumerian (11)

guistic systems such as pottery marks, deity symbols on boundary stones, and so on, whose use is typically limited to one type of medium.

• *Use in Foreign Lands:* These texts have been discovered as fart west as Mesopotamia and the Persian Gulph. These texts typically use the same signs as texts found in the Indus Valley by alter their

ordering. These ‘foreign’ texts have low statistical likelihood values compared to Indus reign texts, even after tasking into account regional variation across the Indus region. This suggests that, like other linguistic scripts, the Indus script may hasve been versatile enough to represent different subject matter or a different language in foreign regions.

Note that although one may find a nonlinguistic system that exhibits one of these properties (e.g. Zipfian distribution) and another that exhibits a different property, e.g. Ligaturing), it would be highly unusual for a nonlinguistic system to exhibit a confluence of all of these properties.

Sproat and colleagues have stated that the properties observed in the Indus script are also seen in “countless nonlinguistic sign systems” (1). Medieval European heraldry, Boy Scout merit badges, and airport/highway signs, cited by Farmer et al. are not linear juxtapositions of symbols that can be up to 17 symbols long, as we find in the case of the Indus script, nor do they exhibit a confluence of script-like properties as enumerated herein. Another nonlinguistic system mentioned in Sproat (17) and Farmer et al. (1) is the Vincˇa sign system, which refers to the markings on pottery and other artifacts from the Vincˇa culture of southeastern Europe of *ca.* 6000–4000 BC. Sproat and the coworkers believe there is order in the Vincˇa system.But Shan Winn (the original investigator) does not make such a claim (18).

“Neither the order nor the direction of the signs in these (sign) groups is generally determinable: judging by the frequent lack of arrangement, precision in the order probably was unimportant . . . Miniature vessels also possess signlike clusters (Figure 12.2j), which are characteristically disarranged.” (18).

Farmer et al. also draw attention to the carvings of deities on Mesopotamian boundary stones known as *kudurrus*. They question the Rao’ statement regarding *kudurru* deity sequences obeying rigid rules of ordering compared to linguistic scripts. Rao et al. cite the work of several scholars in this field and these opinions clearly support the position of Rao et al.

Rao et al. (11) ask the rhetorical question: If the Indus script does encode language, what might the content of the inscriptions be? And answer it in terms of the conventional wisdom: A majority of the Indus texts are found on stamp seals, which were typically used in Bronze Age cultures for regulating trade. Seals were pressed onto clay used to seal packages of goods. Indeed, a number of such clay tags have been found at various sites in the Indus civilization, bearing seal impressions on one side and impressions of woven cloth, reed matting or other packing material on the other. These archaeological observations suggest that the short Indus texts on seals, like their other Bronze age counterparts, probably represent the contents, the origin or destination, the type or amount of goods being traded, name and title of the owner, or some combination of these. Similar linguistic explanations can be found for the inscriptions on other media.

If, on the other hand, as Farmer, Sproat, and Witzel (1) propose, the script merely represents religious or political symbols, one is hard pressed to explain: (1) how and why were sequences of such symbols, with syntactic rules entropically similar to linguistic scripts, and (2) why did the Indus people use these symbols in consistent sequences in their native region and alter their ordering when in a foreign land? As pointed out by other authors, such incongruities are more the norm than the exception if one accepts the nonlinguistic thesis espoused by Farmer and colleagues. The principle of Occam’s razor then suggests that we reject the nonlinguistic hypothesis in favor of the simpler linguistic one.

Concluding Remarks: The culmination of all the valid points offered in a polemic spirit and summarized in the preceding chapter, certainly make it seem possible that the Indus signs are not a form of writing, but a non-linguistic collection of symbols instead. However, the rebuttals to Farmer's position, offered in equally spirited tone and outlined in this chapter, do not prove conclusively that this is in fact the case. Therefore, neither camp is presently in possession of any irrefutable evidence capable of settling the matter.

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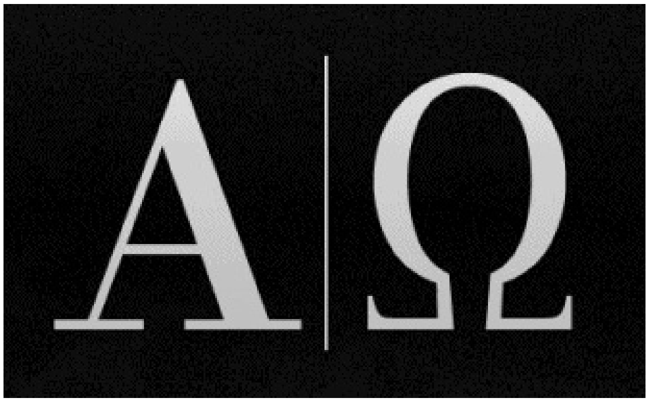
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SECTION IV

The Origins and the End



IV.1. The Roots of the Harappan Civilization IV.2. The Decay and Demise of the Harappan Civilization IV.3. The Enabling Factors

Section IV.

The Beginning and the End



This section deals with the origins and the end of the Harappan society. These two topics are apparently opposite but are in actuality closely interrelated: both represent a cultural change. Cultural change is a huge subject and it is

not possible to review all the theories that are relevant. We shall concentrate here only on those aspects that are immediately related to the emergence of urbanism in the Indus Valley in the middle of third millennium BC and its disintegration into regional cultures of agriculturalists and pastoralists some 700 years later.

Since there is no written records from the Harappan Civilization, all of our evidence necessarily comes from archaeology. This provides us some essential signposts to the origins, growth and disintegration of what Possehl very appropriately calls the Indus Age. We also use the evidence from other civilizations which have been studied more extensively and for which the evidence is much more detailed. These comparative studies show that the road to civilizational growth was nowhere linear and the process of development of social complexity was not similar everywhere. There are, however, some general trends which seem to be common.

The Harappan Civilization covered an area of about one million square kilometers at its peak but despite its geographic vastness, it had a high degree of uniformity in material culture at its several urban centers. Archaeologists list a score of distinct characteristics that identify the Harappan Civilization at its peak:
1. Characteristic written materials and seals. 2. Beads and other jewelery.
3. Standardized brick sizes in ratio of 1 x 2 x4 4. Planned towns with citadels, platforms. 5. Standardized weights.
6. Black or red painted pottery.
7. Parallel sided blades.
8. Copper and bronze articles.
9. Terracotta toys.
10. Cultivation of cotton, barley and wheat.

The beginning of civilization everywhere is in settled communities of food producing people, as opposed to disparate groups of huntergatherers of the Stone Age. In the greater Indus Valley such food producing communities first arose by 7000 BC in the Kachi plains at the border of Sindh and Baluchistan. Here the site of Mehrgarh, excavated in 1970s, is of utmost importance. It played an

important role in developing early farming technology and keeping contacts with settlements farther west. These early Neolithic settlements gave birth to a large number of small and medium size agricultural villages all over the Indus plane by 4000 BC, some of which later transformed into large towns. By 2500 BC, within a small time interval of about 100 to 150 years, several cities emerged and the society was transformed from a strictly argopastoral society into an urban civilization. However, the first large cities arose, not close to Mehrgarh but on the Indus plains, around 2500 BC.

Around 1900 BC the civilization went into a rapid decline and the last of the cities were deurbanized by 1700 BC. This process was marked by the disappearance of the features that had distinguished the Hrappan Civilization from its predecessor cultures: writing, city dwelling, some kind of political control, regional and international trade, occupational specialization, architecture, and widely distributed standardized artifacts. Local materials started to be used for objects like stone tools, and the cultural uniformity of the Mature Indus Civilization gave way to a number of regional groupings, often using material reminiscent of that belonging to the Early Harappan phase in each area. While there was considerable depopulation in the Indus heartland, settlements increased in number in Gujarat, and other communities were established in areas well outside those occupied by the Mature Harappan people, particularly in the East.

We begin with the 'origins' of the Indus Age, tracing the development of early food producing communities in Baluchistan, the proliferation of farming villages in the Indus plain, and the emergence of several urban centers throughout the greater Indus Valley and the neighboring areas to its east and west. We then review the decline and fall of this civilization, the post urban scene, and the legacy of the Harappan Civilization in the later cultures. The reasons for this collapse have been heatedly debated for long and still makes a hefty proportion of any theoretical discussion of the Harappan Civilization. We devote a full chapter to this debate. Since no written records are available on the origin and collapse of the Harappan Civilization, we attempt to drive parallelism with those early civilizations about whom we know somewhat more.

Chapter IV.1.

The Roots of the Harappan Civilization



Issues of origins are always complex and often contentious. Marshall (1), the excavator of Mohenjo-daro and Harappa, commented on it and so did Mackay (2). Later on, Dales (3), Fairservis (4), Ghosh (5) and Mughal (6), have put up theories to explain the origins of the

Harap[pan Civilization. Chakrabarti has offered a comprehensive and a stimulating discussion of this subject (7), and so did Possehl (8) Most recent summary is from Rita Wright (9). The following discussion takes advantage of these reviews and complements it with a brief description of the course of cultural development in the Greater Indus Valley from the beginning of agriculture in Baluchistan to the development of regional cultures which proved to be the antecedents of the Harappan Civilization. For detailed description of these antecedent cultures, see Volume II (*A Prelude to Civilization*) of this series. A summary of the pre-urban cultures of the Indus Civilization has also been offered in Volume III (*The Harappan Civilization - The Material Culture*).

The factors that lead to social complexity are pertinent to understanding the origin of civilization, for the emergence of complex social institutions is inevitably intertwined with the emergence of civilization and state. Unfortunately, despite the great advances that have been made in recent years in understanding complex societies, much about their origins remains controversial. Elman Service has hit upon one of the main reasons for this. He notes that longstanding states have acquired in their later history so many functions and features that their *original* functions are often obscured (51). This is an important point. The characteristics of civilizations at the point where they come to be studied by social scientists may have little relation to the reasons for their emergence. Furthermore, the evolution of states subsequent to their development may respond to a variety of new factors, including both internal and external political situations. These factors may make it difficult to ascertain the nature of early, emerging civilizations.

Complex societies are problem-solving organizations, in which more parts, different kinds of parts, increased social differentiation, more inequality, and more kinds of centralization and control

emerge as circumstances require. Growth of complexity has involved a change from small, internally homogenous, minimally differentiated, and groups characterized by equal access to resources, shifting, ephemeral leadership, and unstable political formations, to large, heterogenous, internally differentiated, class structured, controlled societies in which the resources that sustain life are not equally available to all. The Harappan Civilization was such a complex society but it evolved, as all civilizations did, from simple communities, which themselves had their origins in still simpler groups of hunter-gatherers of the Late Stone Age. We shall not go in this discussion here; the theoretical basis of these matters have already been discussed in Chapter I.1.

The "Origin" of the Harappan Civilization : A Shadow of the West? The first hypothesis regarding the origin of the Indus Civilization came from John Marshall. Marshall did not elaborate his ideas; he was concerned more with discovering details of the civilization than with speculating on its origin. Besides, he did not have much data at his disposal. But what he wrote as early as 1924, while reporting on the discovery of this civilization in the *Illustrated London News* of September 20 of that year, is significant and worth quoting:

"... it is possible, though unlikely, that this civilization of the Indus Valley was an intrusive civilization emanating from further west. What seems *prima facie* more probable is that this forgotten civilization, of which the excavations of Harappa and Mohenjo-daro have now given us a first total glimpse, was developed in the Indus Valley itself ... it is probably true that successive migrations from outside had a useful effect, as they did in Mesopotamia and in Egypt, in promoting the development of indigenous culture, but there is no reason to assume that the culture of this region was imported from other lands, or that its character was primarily modified by outside influences" (1).

Seven years later, in his final report on Mohenjo-daro he was more positive: "the culture represented must have had a long antecedent history on the soil of India, taking us back to an age that at present can only be dimly surmised' (10) .

Contrary to Marshall, however, there were strong opinions which connected the Harappan Civilization to Mesopotamia, especially the culture of Sumer. The Harappan Civilization was even called "Indo-Sumerian" civilization. Mackay was one of these advocates (11). Citing Woolley's opinion that the Uruk people in Mesopotamia were 'invaders from the North', he pointed out that a section of them could have entered India "bringing with them a culture that developed in a different milieu, and perhaps combined with an indigenous culture, produced the civilization that culminated in the great cities of Mohenjo-daro and Harappa" (11).

Sir Mortimer Wheeler recognized that there were differences between the Indus and Sumer, but he felt that there was ultimately some connection between the two that went beyond the sharing of objects by trade. The Indus Civilization, he suggested, was the result of a 'stimulus' coming from the West.The date being later, the early nonurbanized people of the Indus plains could look upon the Mesopotamian growth as a model, something which would guide them to an easy maturity. When Wheeler wrote that 'the idea of civilization came to the Indus from the Euphrates and the Tigris' he meant precisely this emulation of the Mesopotamian model. He was well aware that the Harappan culture was 'too individual to be regarded merely as a Mesopotamian colony' (13).

Wheeler repeated this assertion in virtually the same form almost 10 years later: "If we now review the comparison between the two civilizations as a whole, it is fair to recognize a general affinity with recurring and important differences in detail which are at least sufficient to set aside any likelihood of

immediate or wholesale colonization of the Indus region from Sumer. For the physical structure of the Indus Civilization we must look to more local sources and causes. But this is not to rob Mesopotamia of a close responsibility in the matter. Mesopotamia retains her world priority for the production of a mature and literate civilization, with organized accounts and archives: in other words, to the essential idea of civilization... From Mesopotamia, we may be sure, the mature idea of civilization, always including that of writing, later reached the Indian coast and the Indus Valley by an easy sea route and perhaps by land, to be adapted there to local taste and circumstance"(14). diffusing of new ideas from a more culturally advanced group (Mesopotamia) to one less developed (the Indus), resulting in Mesopotamian stylistic elements and artifacts found at Indus sites. The presence of a small number of Indus seals in Mesopotamia and objects of a Mesopotamian style at Mohenjodaro seemed to indicate the spread of ideas from Mesopotamia. In the 1968 edition of his much acclaimed book, *The Indus Civilization,* Wheeler described the Mesopotamian impact: "It is legitimate to affirm that the idea of civilization came to the Indus from the land of the Twin Rivers, whilst recognizing that the essential self-sufficiency of each of the two civilizations induced a strongly localized and specialized cultural expression of that idea in each region" (13).

Whealer's true meaning remains somewhat obscure. How can we imagine some vaguely understood *idea* of civilization as an active part of the cultural process? How could such an idea have become a cultural reality? It may be that Wheeler was attempting to account for the "style" of the Harappan Civilization, since it shares much with the general class of urban systems of the Near East and Iran in the Bronze Age (15).

Wheeler suggested a few other points also. The excavations at Mohenjo-daro in 1950 showed that the huge mud-brick platform in the *Stupa* Area and its associated buildings dated only from the 'Intermediate' period. This implies that the city as such existed before the citadel was built. He also notes that the slots for horizontal timber work in the burnt-brick construction of one of the early defense towers, and the granary at Mohenjo-daro, are rather unusual in a burnt brick construction and may suggest the builders' familiarity with mud-brick and timber construction on the pattern of Mesopotamia. On the whole, he argues:

"There is the suspicion that the citadelbuilders of Mohenjo-daro and of Harappa were innovators, arriving with architectural traditions founded elsewhere upon the manipulation of mud-brick and timber, and imposing themselves upon a preexisting urban population. The highbuilt citadels seem indeed to be frowning upon their cities with a hint of alien domination. If so, at Mohenjo-daro that domination must have been dynastic rather than cultural, for the excavations of 1950 hinted at a substantial continuity of culture from the pre-citadel into the early citadel phase. These and other possibilities must be given provisional weight without any undue emphasis" (16).

Wheeler probably reach this conclusion Gordon, in 1958, did not have any doubt because he did not see no antecedent develop
ments to explain the ostensibly "sudden" emer
gence of the Harappan Civilization, as though
implanted full bloom from outside. Furthermore,
there was a sufficiently long chronological gap
between the two civilizations. The beginning of
Mesopotamian civilization was earlier than the
Harappan Civilization; it could just be the case of

that there was a piecemeal migration of people from Elam and Mesopotamia to the Indus and, to him, the problem was merely to determine whether these people came by land or sea. He opted for sea. Theirs was not the civilization that had dragged its way slowly and painfully across Makran or Afghanistan in oxcarts, halting by the way and shedding under the impact of time and hardship much of its cultural superiority and efficiency. There was on the other hand ‘evidence’ that it was the product of the stimulus of a new environment on knowledge which had undergone a sea-change (17). Gordon does not make clear the nature of this 'evidence'.

In 1956, Heine-Geldern wrote that, in the Indus context, one was confronted with 'colonial cities' (18). In 1963, Kramer also assumed that the Harappan Civilization owed its origin to the migration of an ethnic stock from Mesopotamia (19). According to him these immigrants were preSumerian, Al Ubaid people who “seeing their language, faith and way of life threatened and perhaps even suppressed, went forth to a new land where they were free to live their lives in accordance with their religious convictions” (20).

All these ideas have one thing in common: the cultural diffusion, first conceptualized by Alfred Kroeber in his influential 1940 paper, *Stimulus Diffusion* (21), defined as the spread of cultural items, such as ideas, styles, religions, technologies, languages, etc, between individuals from one culture to another. Diffusion across cultures is a well-attested and also uncontroversial phenomenon. For example, the practice of agriculture

The high-built citadels seem indeed to be frowning upon their cities with a hint of alien domination.

Sir Mortimer Wheeler, commenting on the cultural influence of the Sumerians

is widely believed to have diffused from West Asia to all Eurasia, less than 10,000 years ago, including the Greater Indus Valley. A concept that has often been mentioned in this regard is that of “an idea whose time has come” - whereby a new cultural item, even an idea appears almost simultaneously and independently in several widely separated places, after certain prerequisite items have diffused across the respective communities.

While the concept of cultural diffusion is well accepted phenomenon in general, conjectures about the existence or the extent of diffusion in specific context have been hotly disputed. Attempts to explain similarities between two cultures by diffusion are often criticized for being ethnocentric, since they imply that the supposed ‘receptors’ would not be capable of innovation if an example was not present. This is the case of diffusion of agriculture and animal husbandry to Eastern Iran and Baluchistan in the 8th millennium BC and the ‘idea of civilization’ in the fourth or the third millennium BC from the West. Diffusion theories suffer from being inherently speculative and hard to prove or disprove, especially for relatively simple cultural items like the use of raised platform for building construction, Gilgamesh type mythological heroes, stories of the Great Flood, solar deity, etc., found so commonly in many cultures from Sumer to the Indus Valley. Another criticism that has been leveled at many diffusion proposals is the failure to explain why certain items were not diffused. For example, why the idea of raised platforms and manufacture of bricks diffused to the Indus Civilization from Mesopotamia but the art of writing did not; or why the style of pottery painting diffused from Baluchistan Turkmenia but the socketed axe did not in reverse.

Wheeler's basic assumption - and those of other researchers quoted above - that the idea of civilization may have come to the Indus Valley from Mesopotamia, is clearly an echo of Kroeber's concept of 'stimulus diffusion' (21). Although it is true that the idea, or even the practice, of plant and animal domestication may, indeed, have diffused to Baluchistan from the West and that agriculture communities in the Indus plains could have been settled by the Neolithic peoples of Baluchistan, Chakarbarti seems to take issue with both propositions. According to him, "it is too general to be specifically useful. What he [Wheeler] does not emphasize is that no idea can germinate in an alien setting unless the setting itself is socioculturally mature enough to assimilate it within its own framework." (7). And, "the instances Kroeber cites of 'stimulus diffusion' are all mere inventions of isolated cultural traits such as the beginning of the European manufacture of porcelain based on the Chinese idea. He also calls them 'stimulus invention'. Moreover, this hypothesis does not explain the Indus 'style' or 'form' of the Civilization" (7).

Wheeler's third assumption that 'the highbuilt citadels seem to be frowning upon their cities with a hint of alien domination' and that 'at Mohenjo-daro that domination must have been dynastic rather than cultural' does not explain why the dynastic domination failed to have a cultural expression. It also does not explain the genesis of his suggested 'preexisting urban population'. "Interestingly enough, Wheeler argues, on the one hand, that the Indus Civilization was too distinctive to be a colony of any alien group and suggests, on the other, that there was an alien, purely political, domination in the Indus Valley."

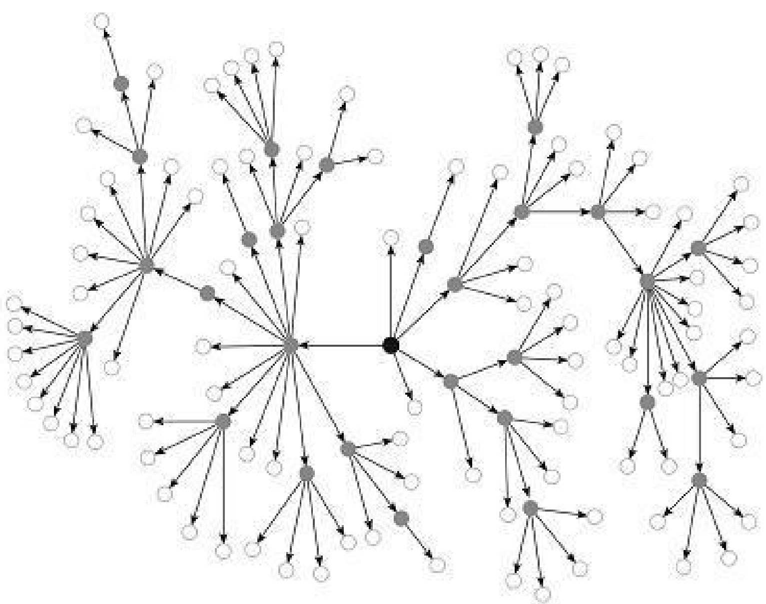
Such a reaction is, however, uncalled for. Within the vast area of Middle Asia, spanning from the eastern shores of the Mediterranean to Mesopotamia, Iran, Central Asia, Baluchistan and the Indus plains, similarities among archaeological assemblages inform us about communication or interaction among the people who were responsible for creating those assemblages. This communication and interaction was undoubtedly made manifest in many ways, both directly and indirectly, through third, fourth, fifth, n… parties. Individual innovations in culture that had value to these peoples were spread in these ways throughout this region; for the most part this communication probably happened very quickly, over a matter of a few years, but the acceptance and implementation of change may have taken longer. Such change could be accepted within the variable sociocultural systems of the Greater Indus Region because there were probably present appropriate sociocultural conditions which made the germination of the *idea of civilization* possible (22).

Archaeology has established that civilization appeared earlier in southern Mesopotamia than anywhere else. Urban conglomerations of populations, monumental architecture and writing were all in existence by 3500 BC, whereas towns elsewhere in western Asia arose in the second millennium BC. The Hittite towns of Anatolia, for instance, or the towns of the Levantine coast such as Ugarit and Byblos, show many traces of Mesopotamian influence. Similarly, in western Iran, the Elamite civilization, which developed out of the Proto-Elamite cities, became more Mesopotamian in character as time progressed, finally adopting the cuneiform script in place of the earlier pictographic Proto-Elamite, though using it for the local language. These later civilizations of western Asia consciously borrowed many Mesopotamian practices and ideas especially the Hittites and the Phoenicians, and through them these were transmitted to other cultures. Towns did not appear in Egypt for several centuries after. In the Indus Valley even the Early Harappan phase, with its small fortified villages, did not begin till shortly before 3000 BC and writing is not known before the mature Harappan phase which cannot be dated before 2500 BC. The rise of towns in the Persian Gulf and highland Iran and Afghanistan was due in part to local development but they were given an

additional stimulus by the growth of trade in the raw materials needed by the great civilizations of Mesopotamia. In Turkmenia, the development never reached the level achieved in Mesopotamia, Egypt or the Indus Valley but judging from the spread of agriculture, the Mesopotamian influence was not entirely absent.

The excavations by Soviet, Italian, and other archaeologists have revealed a number of regional sequences to the north and east of Mesopotamia leading to highly developed incipient states with towns and monumental architecture. Most significant are those of Central Asia and the Helmand area in Afghanistan. These are among a number of such regions which develop complex settlement hierarchies, specialized crafts, and the possibilities for the kind of production and control over goods and new social hierarchies discussed by Friedman and Rowlands (23). In some cases the influence of the core region of Mesopotamia can be directly adduced. In eastern Iran, for example, the site of Tepe Yahya has been interpreted as the production center for chlorite bowls intended for export to the West (24). Even in the much larger site of Shar-eSokhta, the burial evidence indicates the importance of artisans in the new social hierarchy, which suggests that the reprocessing of raw materials for export was a major factor in the town's prosperity.

There is evidence for variation in the frequency and intensity of the various forms of communication and interaction throughout the Indus region and over a long haul. But, it never dropped to nil, or even close to it. The region was always alive with activity linking the diverse peo



A pictorial representation of the idea of Stimulus Diffusion

ples of the Greater Indus Valley; it was just that sometimes it was more alive than others. In this connection, an important factor has been the geography of the land. While we see, for example, an intense interaction between the Neolithic peoples on the slopes of the hills of Baluchistan and Sind Kohistan, the areas in northern Punjab seemed oblivious to agricultural revolution for a long time. Similarly, while the Indus Valley had already experienced the rise of agricultural villages and the development of an urban civilization in Sindh and Punjab, the adjoining areas of India were still populated with hunters and gatherers. The intervening Thal and Salt range on one hand and the Thar Desert on the other evidently played a negative role.

Possehl draws our attention to the role of pastoralists in the diffusion of cultural traits and the spread

of technological innovations (22). Seasonality in the lives of farmers and herders is based in part on geography and the fact that adjacent regions can be complementary. The symbiosis of the highlands of Baluchistan with the Indus lowlands is one of the timeless facts of life within the Greater Indus Region. Migration of pastoralists from the mountains in the winter, and back again for the summer, is one of those constant, enduring patterns of movement and interaction that was present during the entire period of Neolithic settlements in Baluchistan and eastern Iran to agricultural villages of later period. These nomads were frequently also craftsmen, traders, tinkers, transporters, bards and messengers. They bring news from afar, and bring their children potential marriage partners from friends whom they pass and live with in the course of their yearly round. These activities were taking place in the whole contiguous region and a system of relay can well be imagined for an effective, albeit slow, diffusion of ideas as well as arts, craft, and exotic raw materials.

This leads unmistakably to the proposition that the constant search for pasture might have been one of the most important of the great engines that drove the interaction and communication within the region, of course, in a relay fashion. The archaeological, historical and ethnographic records all along with the lands to its west show an array of cultural similarities which is manifest throughout the region. The idea of cultural diffusion from one area to another is, therefore, not out of question. When we look at the geographical spread of artifacts it is not all trade and commerce, transportation specialists and pastoral nomads moving in their search for pasture. Some of it is the ordinary stuff of family business: of acquiring a mate, caring for the elderly, sharing happy or socially important occasions with relatives and friends. It is these, and related activities, that are the forces of cultural diffusion and migration (22).

In summary, a cultural interaction zone of Middle sAia, of which the Indus Valley was an integral part, was a reality and all cultures in this vast area were indeed influenced by each other. There are strong archaeological indications for exchange of technology, artifacts and raw material between these cultures from the very beginning of plant and animal domestication. Under these circumstances, the diffusion of civilizational elements from one culture to another should not be surprising. There is nothing wrong to admit that the people of the Greater Indus Valley may have received some elements of the ‘idea’ of urbanization from the West while they transmitted their own cultural achievements to others. Thus, ‘Stimulus Diffusion’ should not be such a *bete noire* in search of the origins of civilization in the Greater Indus Valley as it has been lately portrayed by some Indian and Pakistani scholars to be. The use of the word "diffusion" may not be fashionable these days but the study of the origins of the Indus Civilization cannot be complete without such a concept. Since we know that the artifacts themselves did not move in some selfpropelled way across this region, it is mechanisms of the kind noted here that must be invoked to explain quite a few similarities between the archaeological finds from far off places ranging from eastern Mesopotamia, to Iran to Turkmenia to Baluchistan, to the Indus plains.

While admitting cultural diffusion, this does not mean that the Indus Civilization was a poor reflection of the Sumerian or some other civilization. The fact that city life emerged in Mesopotamia a few centuries before it appeared in the Indus Valley by no way means that the latter was derived from the former in a direct or indirect way. There are in fact several striking differences between the Harappan and Mesopotamian civilizations. The Mesopotamian had a completely different script, different settlement layouts, and a large-scale canal system of the kind that seems absent in the Harappan Civilization. In Sumer there were 15-20 large cities, each surrounded by smaller towns, villages and hamlets. In the Indus area, by contrast, there were two (later expanded to three) enormous

metropolises and a host of smaller settlements, with no medium-sized towns in between.

The cities themselves were very different too: the rigid layout of the Indus cities on their gridiron plan contrasts sharply with the look of the Mesopotamian cities, with their winding lanes and their appearance of having grown up as circumstances required, without benefit of a preconceived town plan. The writing systems also provide an excellent example: the earliest writing in all three areas was basically pictographic, but the actual symbols chosen to represent a particular object were completely different. The art styles of the two civilizations are also totally dissimilar. These dissimilarities probably prompted Piggott in 1950 to echo Marshall: "…. an origin outside India is inherently improbable, but where and in what form this origin was is quite unknown" (12).

If the Harappan Civilization cannot be explained as an offshoot or offspring of the Mesopotamian civilization, what is the alternative? While some diffusional influences cannot be discounted altogether, the origins of the Harappan Civilization can be traced all the way to the emergence of settled farming communities in Baluchistan in the 7th millennium BC. Its more immediate prelude was the cultural phase that used to be known as pre-Harappan, and is now usually referred to as the Early Harappan phase.

In Search of an Indigenous Origin: In 1964 Ghosh (5) put forward a hypothesis in two parts. First, he postulated a homogenous preHarappan culture in Gujarat, Rajasthan, Sind, Punjab and Baluchistan. The main basis of this part of Ghosh's argument seemed to be a comparison in shapes and designs of the Kalibangan pre-Harappan pottery with that found in the relevant contexts elsewhere in the core area of the Indus Civilization. This analysis is important because he was the first to point out the ceramic similarities between different pre-Harappan sites throughout the Indus area and suggested a cultural continuum on that basis. His attempt was, of course, a limited one and not possibly enough to justify the postulate of a homogenous culture over such a wide area as Baluchistan, the Indus system and Gujarat at the time. Another limitation of this hypothesis was that it was based exclusively on a comparison of pottery, and did not consider other material traits. In emphasizing ceramic similarities, Ghosh had ignored the many differences between the Sothi (the pre-Indus culture of Kalibangan) and Harappan cultures. The result was an overemphasis on the Sothi element in the account of the emergence of the Harappan civilization.

Nothing great is created suddenly, anmore than a bunch of grapes or a fig. If you
tell me that you desire a fig, I answer you
that there must be time. Let it first blossom, then bear fruit, then ripen. Epictetus, The Discourses, I, 15

In the second part of his argument, Ghosh seems to elaborate essentially on the Wheeler's framework. He begins by saying that the origin of the Harappan culture should be looked for within the earlier pre-Harappan culture itself and not outside it. He then visualizes within this culture "a set of people with a receptive mind, perhaps led by a few genius-dictators, bent on an all-round improvement over existing conditions" (5). He further assumes that:
It is to Mughal's credit that the Harappan

Civilization was convincingly shown to be firmly rooted in the pre-Urban cultures of the Greater Indus Valley. Mughal comprehensively defined an Early Harappan horizon in the Greater Indus Valley, and north Baluchistan (6). Terminology - the applicability of the terms like pre-Harappan, Early Harappan, or Early Indus - is not particularly important. But what is important is that there was a cultural continuum with a good deal of shared traits in both north Baluchistan and the Indus Valley

proper.

Mughal systematically considered the mass of data from all the relevant excavated and unexcavated sites and added considerable precision to them in cultural terms. He compared the whole range of evidence (pottery, stone tools, metal artefacts, architecture, etc.) from pre-Harappan and mature Harappan levels, and explored the relationship between the two stages. The preHarappan phase showed large fortified (or walled) settlements, a fairly high level of expertise in specialized crafts such as stone working, metal crafting, and bead making, the use of wheeled transport, and the existence of trade networks. The range of raw materials used by the preHarappans was more or less the same as that used in the mature Harappan phase (except for jade, which is absent in the early Harappan context). The two things lacking were large cities and increased levels of craft specialization. Mughal argued that the 'pre-Harappan' phase actually represented the early, formative phase of the

“They borrowed the idea of cities ... and Harappan culture and that the term '*pre*established cities of their own with a superior
planning, may be with the intention of outdoing the Sumerians. To gain prosperity they would make them realize the need for standardization which they would give effect to in all directions. Over the existing foundations in the rich river plains would their ideas give rise to large cities controlled by inflexible authoritarianism. Within a limited population and under strong leadership, all such changes, vast as they are, could easily take place within a generation or two” (5).

Logically, this part of Ghosh's hypothesis leaves much to be desired. First, he ignores the fact that no genius-dictator can bring about a ba sic qualitative social change in a society unless the society itself is internally ready for such a change. A 'genius-dictator' may hasten the proc ess of change but he cannot stand outside the society and play the role of an arbitrary creator. Second, the sovereign ruler is the product of a class-divided civilized society. It is unlikely that the pre-Harappan society could generate a sovereign ruler or, as Ghosh calls him, a 'genius dictator'. The illogicalities notwithstanding, Ghosh's hy pothesis was the first of a chain of recent hy potheses which have tried to determine the rele vance of the pre-Urban levels to the development of the Harappan urbanism.
Harappan' should therefore be replaced by '*Early Harappan*'.

Mughal also studied the data from northern Afghanistan in terms of internal comparative stratigraphy

and then showed how this area was linked externally with south Afghanistan and the associated areas beyond. Comparing the north Baluchistan material with the Indus Valley cultures, he found close cultural interrelationships between the two regions. The importance of north Baluchistan as the link with the West seems to have ceased with the beginning of the Indus Civilization, and this role seems to have shifted to south Baluchistan. He also pointed out that, towards the end of the 'Early Harappan' period, there was an increase in population both in north Baluchistan and the Greater Indus Valley (6).

In answer to the query 'how did the final change to urbanization come about', Mughal writes: “We already have the evidence of fairly large towns along the river valleys, fortifications, knowledge of stone and metal technology reflecting specialized craftsmanship, wheeled means of transport, trade of lapis lazuli with outside regions and an emerging system of writing. Only two elements of urbanized society are lacking: (i) large cities like Mohenjo-daro, Harappa and Kalibangan, and (ii) increased specialization to engage in full time crafts like seal-engraving, sculpture, modeling and metallurgy which in turn were related to increased access to raw material or means of obtaining them and availability of resources to support craftsmen not directly involved in subsistence activities. During the Early Harappan period in the Greater Indus Valley, we see that the processes leading to such an intensification, increased craft specialization, and class stratification were already in progress. The Mature Harappan culture, therefore, was the ultimate result of these processes” (25).

Since the exposition of Mughal, a lot has been written on the indigenous roots of the Harappan civilization. The Volume II (*A Prelude to Civilization*) of this series consolidates the archaeological literature on the development of agriculture and animal husbandry in Baluchistan and western Sindh and a rise of a large number of farming villages throughout the Greater Indus Valley, some of them were large settlements and could be considered early ‘towns’. The Volume III (*Harappan Civilization - The Material culture*) covers the rise of urbanism on the Indus plains and the material culture of the Indus cities. We need not rehash this immense material here beyond a bare-bone outline. There is some current debate on the level of sociocultural differentiation exhibited by the Indus Civilization and the politicosocial organization of the Harappan society. While this itself is a difficult matter to deal with in a conclusive way, the subject has been handled in Section I of this volume as best as the evidence allowed.

Our story begins with the development of agriculture and animal husbandry in Baluchistan ca. 7th millennium BC. The beginnings of village farming life in western Pakistan were for many years best documented at the well-known site of Kili Gul Mohammad in the Quetta Valley, Baluchistan (48). Later work in Afghanistan, at the sites of Ghar-i-Mar (49,50) and Aq Kupric (50) shed additional light on the domestication process there and gives archaeologists reason to suspect that this way of life had its beginnings in the early millennia of the Holocene. The work in southern Turkmenia and eastern Iran further strengthened this conclusion. Earlier work at several locations in West Asia had shown similar developments. All this indicated that the process of plant and animal domestication was widespread in the whole Middle Asia, of which the Greater Indus Valley was an integral part. Based on available sources, some pockets of West Asia were ahead of other regions in the development of agriculture, animal herding, and settled life in fixed villages.

In Pakistan, confirmation of the Kili Gul Mohammad sequence has been documented at the site of Mehrgarh, on the Kachi Plain, at the base of the Bolan Pass. Mehrgarh is a large site covering in excess of 200 hectares, spanning a time from the beginning of the seventh millennium to the middle of the third millennium BC. There are 16 radiocarbondates from aceramic Mehrgarh that range

between 9385 and 5530 years ago. They average to a calibration of 5225 BC. Thus the beginning of the food-producing economy at the site can be confidently placed within the seventh millennium, probably around 7000 BC and offering a very strong case for an indigenous process of domestication within the Greater Indus Valley (26).

The first occupation (the so-called ‘aceramic’ period) contains fireplaces and evidence for both domesticated and wild barley along with domesticated wheat. There is additional evidence for the use of the Indian jujube (*ber*) and dates. The animal economy is initially dominated by what Meadow describes as "12 species of what might be termed 'big game'. - gazelle, swamp deer, nilgai, blackbuck, onager, chital or spotted deer, water buffalo, wild sheep, wild goat, wild cattle, wild pig, and elephant.” (27). Meadow takes this to indicate that the first inhabitants of aceramic Mehrgarh exploited the Kachi Plain itself as well as the hills that surround it. By the end of the aceramic period the faunal assemblage is quite different from the one just described in that "almost all of the faunal remains that can be identified come from sheep, goat or cattle, three of the domestic animals of principal importance in the Middle East and South Asia today. The very fact of their overwhelming importance in the faunal assemblage is good evidence of the keeping of these animals by the peoples of later period (26) The architecture of Period I at Mehrgarh consists of simple, multi-roomed buildings with space between them that was used for domestic purposes and as burial grounds. Burials, both primary and secondary, are in brick-lined tombs. Interments in the late aceramic have beads of shell and turquoise as well as one lapis bead and another of copper.

Continuity and change are marked at the site with the introduction of soft, buff, chaff tempered pottery in Period IIA. This ceramic seems broadly similar to wares of the Iranian Plateau (e.g. Yahya Periods VII-V, Tepe Sialk, Belt and Hotu Caves), reaching as far west as the Zagros (Jarmo). If this period at Mehrgarh is in fact related to this "ChaffWare Horizon" then it would date to ca. 5500 BC. Period IIB marks the introduction of harder, plain red ceramics, with considerable continuity from older periods in other items of material culture.The point to be made here is that the village farming community begins on the plains of the Indus Valley in the seventh millennium, if not earlier, and this is the foundation on which the Mature, Urban Phase of the Harappan Civilization rests and from which it must ultimately be derived (26).

be derived (26).

1985 (47) is in real sense epoch making. Not only has it provided the earliest evidence for settled life in Baluchistan, going back to the seventh millennium BC, but has also provided solid evidence for the steady and gradual emergence of the Harappan elements. The evidence from Mehrgarh laid to rest the earlier controversial theory of the Western world being responsible for the emergence of the Harappan Civilization. The excavations have demonstrated seven different stages of development prior to emergence of the Harappan culture in the last stage (VIII). What is evident here is the introduction of various Harappan elements at different levels at the site throughout the first seven phases, culminating into the emergence of the Harappan culture in the last stage/ phase (VIII).

The late fifth and early fourth millennium BC saw the spread of farming communities into the Indus Basin and eventually as far as the IndoGangetic Divide, also deep into Saurashtra in present-day India. Permanent settlements were established both in areas that had previously only been visited seasonally by pastoralists. Some communities shifted their home location from upland to plain; although the pastoral sector still travelled seasonally between regions. This move must reflect the development

among highland communities of Baluchistan of the technology, knowledge, and confidence to exploit the new environmental zones offered by the Indus Basin and to overcome their limitations. This was part of an enduring process, whereby pastoralists seeking seasonal grazing gained familiarity with new regions that later enabled their kin or other members of the community to move in and colonize these regions with permanent agricultural settlements.

In every region where archaeological survey has been adequate, including Seistan, Kandahar, the Derajat, most of eastern Baluchistan, and western Sind, as well as Bahawalpur and northern Rajasthan, the settlement pattern seems to have been generally an effective distribution of sites in favorable areas. That is, the number of sites increases according to the availability of land and water resources. Most sites are relatively modest in size, no more than three or four hundred feet across in any direction. An attempt was made by using modern village statistics to estimate the populations of some of these sites, and a figure of from 100 to 800 people is a conservative estimate of the range of population, though likely several thousand people may have lived in some of the larger sites such as Mundigak or Dabar Kot (52).

Most villages of the time were unwalled, and the energies of the people appear to have been used to meet the challenges of a daily life based on food production.Copper-bronze metallurgy, the grinding and polishing of fine stones, the elaboration of painted designs on pottery, as well as the perfecting of ceramic technology are among the archaeological hallmarks of this village life. A wide range of complex motifs on painted pottery testifies to a rise of graphic symbolism.

Settlement in the Indus Basin was attractive because it offered a vast expanse of well-watered fertile land for arable agriculture and even wider expanses for grazing animals. Wild game, fish, and plants offered additional resources, and there were sufficient timber and plentiful mud for construction, as well as fuel for domestic and industrial activities. Unlike other foci of urban development, such as the Euphrates Valley, the Indus Basin and its environs were well-endowed with mineral resources, including flint in the Rohri Hills in Sindh, agate and carnelian in Gujarat, gold dust on the upper Indus, and steatite, copper, and perhaps tin in nearby southern Baluchistan, as well as the stone and metal ores available in the IndoIranian borderlands.

In arid Baluchistan, dry farming was possible only in river valley bottoms, and water conservation was vital for high agricultural productivity. The inhabitants of many settlements built simple dams (*bunds* and *gabarbands*) to impound or divert water that flowed off the surrounding higher ground in the spring when the melting of highland snows filled generally dry streams with seasonal torrents. This water could then be used for irrigation later in the year when temperatures rose and the ground became parched. As population increased, this technological expertise aided the settlement of new regions, made necessary by competition for the limited land suitable for farming in the arid highland region. The economic importance of cattle, the dominant domestic animal, also put pressure on arable land because they need to graze or obtain fodder from land suitable for cultivation, unlike sheep and goats, which can find adequate grazing in the scrub vegetation on uncultivated land. It is possible that these economic pressures were increased by climatic factors, since some global data suggest that the fourth millennium was more arid than previous millennia and that this aridity peaked in the period around 3200-3000 BC.

The Early Harappan Cultures - A Harbinger of the Indus Urbanization: The settlements on the Indus plains as well as in Baluchistan and Ghaggar-Hakra region grew into several regional cultures,

such as Kulli, Damb Saadat, Kot Diji, Amir, Nal, etc. Collectively, these cultures have been named the pre-Harappan, Early Harappan, and pre-Urban cultures. Mughal (6) argued that these cultures actually represented the early, formative phase of the Harappan Civilization and that the term 'pre-Harappan' should therefore be replaced by 'Early Harappan' or Early Indus. While some scholars still call these preurban cultures ‘pre-Harappan’ the terms "Early Indus" or "Early Harappan" are preferred because they reflect this period's cultural continuity with the Indus Civilization. Possehl (28) prefers to call them ‘pre-Urban’.
Whatever its name, this developmental period interposed between a mature rural economy and a full-fledged city life can be considered as a formative stage, which effectively preluded the urban civilization that was to come. Chronologically, this time period roughly spanned from 3200 BC to 2600 BC and it constituted a determining factor for the rise of Indus Civilization. What follows is an account of what this evidence is and how it might be interpreted within the context of the development of the city life to which all this momentum seems to be pushing forward. We shall be talking here in generalities since a detail account of them have already been provided in Volume II (*A Prelude to Civilization*).

Looking at the Early Harappan stage as a whole, one observes a pronounced geographical expansion of agricultural settlements into Sindh, the plains of Punjab, the Pothowar plateau and the Salt Range, the Derajaats and Bannu, the arid zone of Cholistan and into Indian Punjab and the neighboring area of Kutch. During this stage, welldeveloped agricultural economies also spread into northeastern Iran, southern Afghanistan, even as far as northern Afghanistan and Tukmenia. The themes of cultural continuity and change, growth, and geographical expansion, detected in the preceding phase of the development of mature agricultural villages and pastoral camps, persist, with a few hints of new technological innovations. Regionalism is present but at much reduced level and in a much reduced contrast. The growth is, therefore, for the most part, best seen as ontological, not evolutionary. This is not to say that developmental change is absent from this stage. It is there, but it is not the predominant process (22). The physical expansion of cultural systems that were already in place in the previous phases seems to have been the predominant theme within the Greater Indus Region during this time. These themes become clearer as we examine the individual phases and cultures, described in the Volume II (*A Prelude to Civilization*).

The society of these Early Indus villages appear to have been household centered, that is, family groups clustering in kin-related villages. Even assuming a degree of longevity beyond the estimated life span of 35-40 years for the individual, it is unlikely that any given family could have been made up of more than 20 individuals unless, as in the Chinese case, for example, the descendents of brothers remained at the grandfather's home (53). The fact that in any given area where these early villages are situated the artifactual assemblage is identical from village to village argues not only for a commonality of technology and aesthetics but also for social ties. Typically, farming villages in much of the world weave a web of extra settlement kin ties usually through village exogamic practices, and this seems to be the case in pre-Harappan times. Burials of infants, women and occasionally men in or around the houses in sites like Mundigak, Damb Sadaat, Nal, etc., demonstrate a powerful ideological relationship to one's house that argues for longevity of occupation by given families. In fact, one of the striking features of many of these sites is the depth of continuous cultural deposition, evidence of what was probably 300 years or more of unbroken occupation (53).

In the plethora of graphic symbols which mark the cultures of that time some indeed may represent that clan phenomenon or its equivalent in inter-village sodality. There is, indeed, striking artifactual

style unity which obviously has its sources in social and ideological unity at the village level. In effect, one has reason then to argue that this unity is also matched by language unity. The fact that there are artifactual differences in style but not the
kind between regions, for example Quetta-Pishin, vis-a-vis Kandahar, Zhob, southwestern Sind, northeastern Sind, and northern Rajasthan may reflect dialectal differences but probably not language differences, though one might say that linguistic directions were being taken that could lead to the consequence of new languages within the interregional cultural family.

In the later stages of the development of these village farming communities we are increasingly aware of the growth of larger settlements and of the decrease in number of smaller communities in the highlands generally. We now encounter walled sites or "citadels" like that of Dabar Kot, Mundigak IV, the stone-built Kulli sites of southern Baluchistan, and of the Harappan civilization itself. Monumental building crowns many a site within which are the remains of the older village habitations. In terms of artifactual content, copper-bronze is more common, objects in lapis, ivory, jet, carnelian, polished slate, faience, gold and silver are found. At sites like Harappa, Lothal, Kalibangan, Edith Shahr in Las Bela, etc., there is evidence for large private houses, signs of regularly laid out streets, incipient sewer systems, and wall-surrounded platforms on which are sizable "public" buildings. Damb Sadaat III has a truncated pyramidal structure with a drain at its center at the top of the mound, and there are suggestions of similar buildings throughout much of the western borderlands.

We are thus made aware of centralization of local authority, which may in turn be interregional in some cases. It is an authority in which wealth undeniably had a role but which is best symbolized by the walled high places and other manifestations of power and influence. In these remains we are made aware of a shift in polity, from one based on an essential village ethos familial in nature to one now based on a system of classes and of wealth. It is essential that we outline what may have happened.

Village polities tend to be essentially democratic; that is, all of the families tend to be landholders and all essentially work the land. The division of labor is sexual and generational; interfamilial cooperation revolves around collective interests in maintaining the essential well-being of the village. In all matters affecting crop growth and herd health there is a common interest. Storage, water rights, seasonal occupations, the cycle of the seasons and its reflections in crop growth and harvest, the ritual year, marriages, deaths and births are subjects of common interest. Ideally, village polities are characterized by the necessity to regulate goods and services, both social and economic. The need for leadership in the construction and use of water control devices - *gabarbands*, *kachs*, etc. - in the regulation of equivalencies in exchanges with itinerant merchants, smiths, and entertainers, and in religious matters; and the giving of authority to leaders in preventing raids and the depredations of wild animals, are some of the collective problems which require a dependable polity. For this every village attempts to balance democratic spokesmanship with efficient authority. This takes many forms, from simple village councils of elders to the increased prominence of particular families, clans or other sodalities to serve particular functions (53).

The evolution from temporary to permanent authority is often coterminous with the acquisition of wealth and the power it obtains. There are so many factors which can bring this about: personal ambition, disparity in land productivity, accident and disease decimating land-holding families, failures of inheritance lines, wealth measured in terms other than simply land and live- stock, discrepancies in labor resources, etc., or indeed something each of these in almost endless

combination. One major factor appears to have been population pressure on limited land resources in both the highlands of Baluchistan and along the margins of rivers in semi-arid situations like the eastern Nara and the Ghaggar-Hakra basin. This not only took the forms of movement within and to fertile lands, thus the spread of the essential village ethos into the whole region, but more importantly it demanded the intensive exploitation of immediate soil and water resoqrces. This probably motivated the construction of dams and other water and soil control mechanisms which required centralized authority, since these projects frequently affected more people than those of the immediate village. The transfer of authority from the essentially familial and democratic village system to a system of central control, even though local, in effect objectified what had been personal and subjective, and created a new group of symbols: large buildings, walled "citadels", exotic arifacts, and new specializations (53).

Specialization at the village level appears to have resolved itself around the village industries of pottery, weaving, possibly local working of stones, and smithing. Their elaboration is marked by the appearance of non-indigen- ous materials and artifacts such as carnelian beads, copperbronze tools and other objects. With the climax in centralization we have excellent evidence for the presence of merchants and specialized craftsmen, the use of standardized systems of weights and measures, and the administration of whatever func- tion is represented by the "public" buildings like the large pillared hall at Mundigak, the "granaries" of Mohenjo-daro and Harappa, the dock at Lothal, and the truncated pyramids standing at Edith Shahr. Gold, silver, carnelian, seashell and lapis lazuli, while not run-of-the-mill, were common enough materials for the adornment of whoever wore the necklaces, bracelets and rings which are found at many sites of the Mature Harappan phase and its regional parallels.

Different environments required different modes of adaptation in different parts of the land. Since these adaptations could not have happened uniformly or along the same lines, the evolved cultural traits were still largely regional and varied. Nevertheless, one begins to observe a common thread that ran through these regions and their respective cultural variations. The pre-existent regionalism, so observable in elementary agricultural communities in the preceding Neolithic period, continued to manifest itself but different subregional cultures started to merge into each other. The number of localized cultures drastically decreased, the respective areas of the newly evolving cultural regions became large, and the boundaries between these cultural units became rather fuzzy. The process of regional integration has indeed begun although one cannot discern it beyond the observation of a common ethos, a common Indus spirit. This process would intensify in time until all the regional cultures or “cultural phases” converge into a common Indus Civilization.

Several factors could have contributed to this transformation. Undoubtedly one important element must be the relation established between the upland valleys and the flood plains. Another must have been the arteries through which longdistance trade flowed, particularly those originating in the main centers of wealth wherever they may have been. It is probably this trade, coupled with highly developed pastoralism, which provided stimuli for the development of an incipient urbanization in the Greater Indus Valley, and spreading it into neighboring interaction zones, such as southern Afghanistan and Siestan, even as far as Turkmenistan, leading to the growth of sites such as Shar-i-Sokhta, Mundigak, and Namazga into towns or even “caravan cities” (22). A similar expansion occurred towards the East, especially into Gujarat (India) and to some extent into east Punjab along the borders of the modern-day India and Pakistan.

Pottery was the most visible craft product, and wheel-made pottery dominates in all of the Early Harappan cultures. The stone was the chief material for tools, chert flakes and blades comprising the bulk of the normal tool-kit, with some bone tools thrown in. However, the technology was now firmly Chalcolithic (that is, using both stone and copper), and the progress in the smelting of ores is shown by the remains of a workshop at Nal (Baluchistan)., where smelting of lead ore has strongly been indicated. The more precious metals were worked to provide ornaments.

Despite the different traditions in pottery and other cultural traits, the Early Harappan cultures had many features in common and despite the absence of ‘revolutionary’ developments in technology, some truly efficient modes of production and transportation made their appearance. First, there was a notable advance in agriculture, with the conversion of the ox into a draught animal. The discovery of cart-ruts in the Early Harappan levels at Harappa is to be placed alongside that of cart-wheels, cart-frames and bulls in terracotta models at Jalilpur in Punjab during this period. The use of the two-wheel ox-cart in the Indus basin is therefore probably not much later than the wheeled wagon (four-wheel cart) attested in pictographs at Uruk in Iraq, just before 3000 BC. The spread of the use of the vertical wheel, and therefore of the cart, was truly a momentous event, for it made heavy transportation possible in the plains.

Once the ox is used to pull a cart, it is almost certain that it was also being used to draw the plough. There has, indeed, been found at Kalibangan (northern Rajasthan) at the Indo-Pak borders, a field with straight furrows, parts of which lie below some Mature Indus debris, leading the excavators to assign it to the Early Harappan phase. The new use of the ox was not seemingly adopted everywhere. At Balakot (southeastern Baluchistan), in its Amri-Nal phase, the oxen were slaughtered early, so that they could not have worked as draught animals; at Jalilpur (central Punjab), in its Kot-Diji phase, on the other hand, the oxen generally attained their full size before slaughter, and so must have been used for work. The plough greatly lessened the labor of peasants previously performing the same task manually with the hoe, and also enabled the same family to till a much larger area of land. Accordingly, it brought a substantial increase in yield per head of population.

We may recall that barley had begun to be cultivated at Mehrgarh in the Kachi plains as far back as 7th millennium BC and wheat probably a millennium later. These crops are found in the Early Harappan period also at Rehman Dheri and other sites. Both of these are ‘rabi’ or winter crops. It is very well possible, in fact probable, that *jawar* and *Bajra* was introduced for cultivation as a *kharif* or summer crop. This addition to food supply evidently made its way from Africa through the Iranian plateau, of which Baluchistan is a part. If it is true, then the amount of cereal production must have increased quite substantially and it must have provided the fodder for the cattle, which the Indus man seemed to have aplenty. This development, coupled with the use of plough, provided the surplus of food to the society and made it possible that a large class of nonagrarian people could arise. They were the artisans, the managerial or religious groups, and the traders who were an integral and necessary component of an urban or near-urban culture.

These advances in economic activity help to explain the much larger number of settlements of larger size and more permanent nature than those of the preceding ‘Neolithic’ cultures, discussed in the above. Mud-bricks were universally employed to build houses, with stone sometimes used, whenever locally available, in foundations and in lower levels of walls. However, the use of fired bricks is entirely absent. The estimated size of Harappa, in its Kot Diji levels, is 40 hectares, and a similar size has been claimed for one or two other sites. Possehl estimates that based on the size of 291 Early

Harappan sites, the average size was 4.5 hectares, while thirty-four settlements exceeded 10 hectares in individual size. The Urban Revolution had not yet arrived, but some settlements were certainly getting close to being small townships (8).

Yet, the extent of social differentiation was rather limited. Seals, if they are seen as symbols of ownership claims, are rare, though some small terracotta seals from Quetta Valley, Mehrgarh and Nausharo (Kachi plains) have been reported. Anything that can be called a palace or monument building has not been identified. Defensive walls, which are most likely to have been the work of rulers, are found at Kot Diji, Kohtras Buthi (western Sind) and Rehman Dheri in Bannu District. But the impression one gets is of small principalities, rather than large powerful cities or states.

Funerary rites are an important aspect of religion. In the Amri-Nal culture area, at Nal and Damb Buthi in Baluchistan we find fractional burials, which show that the dead were left exposed, and later their bones were collected and buried along with pots. At the Kot Diji sites of Periano Ghundai and Mughal Ghundai(northern Baluchistan), on the other hand, the dead seem to have been cremated first and then their bones collected and put in pots to be buried. No straightforward extended burial is firmly attributed to the Early Harappan period although it is possible that the burial of flexed bodies, practiced at several sites in the preceding times, may have continued.

Pottery decorations and terracotta figurines might also tell us about the people's belief. Parallel to the bull portrayed in the Damb Sadaat or Quetta ware is the horned figure on a pot from Kot Diji. Some archaeologists have taken the former as an indication of bull worship and the latter as a sign of 'horned deity'. Female figurines in clay found at Jalilpur, Gumla and Sarai Khola (Kot Diji sites) as well as in Quetta Valley, Zhob-Loralai (central Baluchistan) and at Mehrgarh (Kachi plains) have been interpreted as the worship of some form of Mother Goddess. These interpretations probably stem from a general tendency of western scholars to excessively romanticizing the concept of gods and goddesses in foreign cultures. The insistence of some Indian scholars on the religious nature of such decorative depictions evidently stems from their reflexive desire to connect the later traits of Hinduism with the antiquity of the Indus Civilization. The fact is, however, that neither the funerary rituals of the Indus Civilization nor most of its 'deities' can be traced to any of the Early Harappan cultures. The connection of the bull and horns painting or that of the female figurines with the Indus religion of the time is tenuous at best (see Section II for details).

The number of non-agricultural crafts and their practitioners multiplied because of a number of inventions: the spindle and the loom, the potter's wheel, the smelting of copper, the bow-drill, the cart wheel, and the ever increasing pottery forms. These inventions called for greater specialization of skills and so of a progressive division of labor in which one individual concentrated on a single craft. The craftsmen could obtain their means of subsistence by passing on their products by sale to their customers, many of whom lived in large villages. The artisans acquired their raw material locally as well as from long distances through third parties. This system of exchange gave birth to trade which is the backbone of an urban society and the evidence of which we encounter often as we study the remains of the Early Harappan cultures as well as those of the Mature Harappan Civilization.

There is no evidence of writing. Potter's marks found in the Amri-Nal strata of Balakot and at the Kot Diji site of Rehman Dheri may signify either the individual artisans' marks or ritualistic symbols. Significantly, the Balakot and Rehman Dheri marks do not match well, and the relationship of either to the Indus script is debatable (see Section III).

Of the various Early Harappan cultures we are considering here, only the Kot Diji culture survived the onset of the Indus Civilization in a substantial area covering much of Punjab. At sites such as Rehman Dheri, Gumla and Tarakai Qila in the Pashtun country, and Sarai Khola in northern Punjab, we have remains of this phase. While showing some influence of the Indus Civilization, they do not have any of its characteristic features, viz. writing, baked bricks, distinctive pottery, etc. Similarly, a local culture named after the type-site Kulli had established itself in southern Baluchistan and remained alive on the periphery of the Indus Civilization for considerable time period. In general, however, all of the regional cultures converged and after imparting some of their respective traditions to the Indus Civilization, vanished for good.

We usually distinguish towns from villages by their size: a town contains a much larger number of people than a village. We also make a distinction on the basis of the inhabitants' occupation: a village consists mainly of those who live by agriculture or cattle-rearing; a town, mainly of those who follow non-agricultural crafts, and provide labor and services to other townsmen. A moment's reflection will show that this necessarily follows from the town simply being larger than the village. If a village, containing people who live by agriculture, grows larger, many of its inhabitants will have to till fields or take cattle, goats and sheep to grazing grounds at very long distances from it, and the inconvenience will force them to move to a new village closer to their fields or pastures. A village that is based purely on agriculture or pastoral pursuits cannot, therefore, grow beyond a particular size. But for craftsmen, traders, and other service providers there would be no difficulty in living in large settlements, for they can still go on working in their homes. Indeed, the larger the settlement grows, the better it can supply them with customers and meet their needs from its markets and shops. The emergence of towns, which archaeologists initially recognize by the large area their remains cover, necessarily implies the presence of a considerable number of people who do not grow food for themselves, but work at crafts or perform services while subsisting on food produced mainly by villagers.

Such a situation could only be brought about when peasants grew more food than they needed for their own bare subsistence, or, in other words, produce a 'surplus'. Such ability did not immediately come about when agriculture first began to be practiced during the Neolithic times. A further set of developments was necessary to increase agricultural production, for example: addition to the inventory of crops cultivated, making it possible to obtain both food and 'industrial' crops, and the use of oxen and other beasts of burden to be yoked to the plough and to the cart, thereby helping to till a much larger area with the same amount of manual labor and to transport by cart the surplus grain to the towns. As indicated in the previous pages, both of these conditions were met in the Early Indus cultures discussed here. First of all, the *rabi* crops of barley and wheat were supplemented by the *kharif*' crops of *jwar* and *Bajra*. These food crops were further augmented by the probable cultivation of cotton, which supplied a vital raw material to the artisans engaged in spinning of thread and weaving of cloth. Second, the wheeled cart and plough came in use, and there is strong evidence for it.

It is therefore not surprising that through this 'surplus' created by the peasants, division of labor and specialization, technological inventions, and trade or exchange, some settlements of the time became much larger than the average agricultural village communities. In fact, as mentioned before, the site remains of some villages found from this era are extraordinary larger than the majority of them. These were most likely the 'towns' rather than the agricultural villages defined above. These 'towns' did not grow into 'cities' at par with those of the Indus Civilization that was to come and they were by

no means the urban centers that followed. Nevertheless, the seed of the Indus cities were sown and the raw material for the onset of an urban civilization was definitely at hand.

Another major precondition for the rise of towns and cities is the establishment of trade and communication networks that link settlements to each other and to their agricultural hinterlands, as well as to distant resource areas. Four major spheres of interaction and exchange can be documented during the Early Indus period. 1) the southern Indus plain and adjacent western highlands of Baluchistan, 2) the southern Sind and adjacent area of Gujrat, 3) the northern Indus and Gagghar-Hakra valley (Cholistan), and 4) the highland valleys of northern Baluchistan and southern Afghanistan. Trade links with the Arabian Sea coast, especially along the Baluchistan and the Persian coastline, seem already to have been established. At the same time, the trade and cultural contacts with Central Asia continued, in fact strengthened.

Archaeological evidence points to the fact that the artifacts were not always used at the location of their production. For example, by 4,800 BC, during Mehrgarh III, the site no longer consumed finished products made in that region, but rather it produced them. Copper, shell, agate, chert and minerals for pigments were obtained from distant sources and processed by highly skilled artisans at the site. Mehrgarh producers soon made superior painted pottery, glazed steatite and faience objects and traded to the outlying regions for more raw material or other articles of use.

Easy means of transportation played an important role in consolidating the cultural gains of the adjacent lands and spurred trade and exchange between distant regions. Two-wheel carts pulled by oxen were used for heavy transport across the plains while flat-bottomed boats and rafts were probably used on the rivers. Human porters or pack animals such as oxen, water buffalo, and half-ass could have moved goods back and forth from the highlands. The major new development at this time was the importing of raw materials from distant sources to workshops in the larger settlements. Whereas the initial processing of raw materials such as copper, stone and shell occurred at the source areas, final processing was done in workshops located at the settlements, where it was easier to control the style of objects being produced and was also economically more profitable.
The classical ’trade’ definitely played a pivotal role but more so was the system of ‘exchange’ that is not based on instant parity but on a generational time scale. Such an ‘exchange’ is common even to day in certain parts of Pakistan. For example, it is a common practice in the Thal desert that in times of drought, the inhabitants of the inflicted area move their animals, sometimes men, women and children as well, to the areas where water, food, and fodder is still available and then wait for the better times to come. The host communities do not get anything in return at the time but it is a favor granted to the distressed community in anticipation of the return of a similar favor whenever they themselves could be in such a need. The favor given in the present generation could very well be returned in the next or the next to the next generation. Thus a system of selfsustaining insurance is firmly in place. It could be easily visualized that such an insurance system or the self-understood arrangement of nontransactional, exchange could have been practically a norm in the ancient times of the entire land.

For the development and maintenance of large population centers, it is also necessary to have diverse and abundant resources for building large settlements and supplying raw materials for making tools, ornaments and religious objects. During the Early Harappan period, explorers from villages in different regions searched out the sources of precious materials such as lapis lazuli, carnelian, copper, seashells, and gold. The pastoralists, obviously, played an important role in such

explorations. Boulders from mountain streams or chert nodules from the central Rohri hills were used for making tools and grinding stones. Many essential raw materials were available in different locations of the greater Indus Valley. This pattern of distribution may have played an important role in stimulating competition between different regions and the search for additional sources.

New technologies that developed in conjunction with trade begin to fulfill another major precondition for the rise of urbanization, which is the presence of appropriate technologies to build and maintain a town or a city. Many basic technologies were developed during the initial phase of settling down, but towns and cities are different from villages, both in scale and complexity. More varieties of distinctive ornaments are required to differentiate the many different classes of people who live in cities. Specialized technologies were invented to create new materials just for the elite: high-fired ceramics, higher qualities of glazed steatite and faience, stoneware, decorated carnelian and bronze.

Clay from the riverbanks was made into handsome vessels that were painted and fired in special kilns to produce red or gray ceramics. The high temperatures and special pigments allowed these early artisans to develop the first glazing technology using steatite to make white or bluegreen colored beads. Eventually powdered quartz was fired to create a new material known as faience, which could be coated with silica and copper minerals to produce a shiny turquoise glaze. Copper speartips and ornamental pins reflect uses for metal, from weapons and tools to ornaments. The alloying of copper with tin or arsenic may have begun during this period: it was well established during the early urban phase. Alloys may have first been used to produce different color tones in metal, but metalsmiths soon came to appreciate that alloys also increased the hardness and working life of a metal tool.

Along with these craft technologies was the beginning of abstract designs that may be the predecessors of writing. These marks, often referred to as potters' marks, may have been necessary to distinguish pottery made by different individuals when they were all put together in a single kiln for firing. Other signs, called graffiti, were scratched onto pottery after it had been fired. These signs may have indicated the contents of a vessel, the owner of a vessel, or possibly magical symbols related to religious beliefs. Although some early potters' marks and graffiti are identical to signs of the later Indus script, the invention of the Indus script probably did not evolve from potters' marking their wares. It was probably invented by or for the people who controlled the cities and not the artisans who labored in the workshops. Such identification marks are found on pottery from all of the Early Indus cultures but no sign of writing seems to be emerging from the remains of this time.

With the invention of new techniques, creation of agricultural surplus, and production of specialized objects came the problem of protecting and controlling these valuable commodities. Compartmented buildings continued to be constructed that served for the storage of surplus grain. At some sites, houses were built around a central courtyard that provided an open space for working, but was private from the streets and lanes of the settlement. Villages were surrounded by thick walls, made from sun-dried brick. These walls served as protection against raiding and wild animals, but they also defined a boundary around the village to which access could be controlled. By having walls and gateways, anyone carrying goods or commodities into or out of a settlement could be monitored. These walls also protected the villages from annual floods, and as the site grew, they had to be extended. This technology for raising and protecting a settlement against floods became essential for large cities that were to come during the Mature Harappan Civilization.

As settlements became larger during the last phase of the Early Harappan phase, we see the first

evidence for building latrines, drains, and washing areas. Archaeologists have not yet identified wells from the early settlements, but this is possibly due to the fact that wells are usually maintained for hundreds of years and are often repaired by later inhabitants. Some of the wells in the later Indus cities may have been first constructed by the earlier villagers.

Irrigation technology, invented during this period, was practiced primarily along the piedmont zone and in areas where the smaller tributaries of the larger rivers could be exploited. Out on the active flood plain there was no possibility of controlling the mighty rivers and, in fact, there was little need to do so. The annual flooding created ponds and oxbow lakes that served as reservoir for agriculture, for watering herds and for fishing.

War was absent in this stage as it was during the previous times. Although many settlements did have walls around them for protection, there is no evidence for massive destruction levels or slaughtered inhabitants at any of the sites. Ash layers at the site of Kot Diji may represent the intentional destruction of the site, but fire could just as well have been accidental. The settlement was soon rebuilt and strong continuities in ceramics and other artifacts suggest that the inhabitants were not replaced by a new culture. A similar pattern of burning and rebuilding has been documented at the site of Naushahro, but here too there is no evidence for killing or intentional destruction of the town. In contrast to this, there is no evidence for discontinuity of occupation between the Early and the Mature Harappan phases. Over several hundred years,however, artifact styles such as ceramics and figurines gradually changed. At some sites there is strong evidence of cultural discontinuity, showing the movements of new occupants, but there is more evidence for a general continuity in culture and technology.

The diverse agricultural and mineral resources of the Greater Indus Valley were not accessible to all communities or individuals, and during this period certain settlements located at important crossroads of trade and exchange networks with access to rich agricultural lands grew. For example, from 3300 to 2600 BC the small agricultural village at the site of Harappa grew into a large town of over 15 hectares. Other settlements of the same time located in the hinterland around Harappa are all much smaller. The early town at Harappa had trade connections with the chert quarries at the Rohri hills in the central Indus and shell collectors of the distant Makran coast. Precious stones, such as carnelian and agate, lapis lazuli and steatite, were brought to the site from mines to the south and from the highlands to the west. Harappa was no longer just a small agricultural village like scores of other villages dotting the plains and the hills alike; it had become a small town that must have had considerable political power over the trade and economics of the region.

Complex processes of social change resulting in stratified classes and occupational specialists set the foundation for later social organization in the Indus cities. These processes can be characterized by two different models of social fragmentation and agglomeration. As individual artisans or their families became more specialized in one occupation, such as herding, fishing, shell working or pottery making, they became socially and economically separated from the rest of the community which eventually led to the formation of distinct social classes based on occupational specialization. The other process that leads to the development of stratified social classes is agglomeration, where individuals or entire communities of specialists become attached to a large community. With the creation of distinct communities through fragmentation or agglomeration, new relationships emerged, and social classes were ranked on the basis of complex social, economic, political and religious factors. Some scholars would like to connect this type of social order with the development

of cast system that later on became an integral part of Brahmanical Hinduism (see Section I and II).

In every society, social status is defined by material possessions and the power to act in certain ways. However, which objects are determined to have high value differs in each region depending on the availability of materials as well as ritual beliefs. For example, lapis lazuli was an important symbol of wealth and power in Mesopotamia because it was brought from the distant regions of Baluchistan and Badakhshan in the north of Afghanistan, while in the Indus Valley this more easily available stone was relatively unimportant. In contrast, the Indus elites preferred objects made of materials that were transformed by complex technology, such as faience, stoneware and red carnelian. With the rise of Indus cities, craft that produced these materials and elaborate objects became more important as a means for reinforcing and maintaining the social order. Consequently, the control of these crafts and their products would have been essential for maintaining political and economic power.

In some communities, the highest status is given to people who acquire goods that are then redistributed to everyone in the community. Usually, these goods consist of consumable items, such as livestock or produce, but occasionally they include exotic ornaments or tools made from rare materials. In other societies status and power is represented by the accumulation of wealth and the display of valuable ornaments and clothing, and building monumental structures such as temples and tombs. Since no structures have so far been uncovered from the time period under discussion, it can be safely assumed that a higher status was dictated by the control and distribution of grain and probably other material.

Unlike the funerary practices of Mesopotamia and Egypt, no Indus burials from this period revealed individuals interred with great wealth. Although Mehrgarh and Nal are the only sites where cemeteries from this period have been excavated, the burial show a smaller amount of wealth compared with the burials of the earlier Neolithic inhabitants of the sites. This dramatic change in burial customs is intriguing because it suggests that unlike other communities to the west, the people of Mehrgarh and Nal chose to keep their wealth in circulation rather than burying it with the dead. This distinctive burial pattern is also seen in the cemeteries of the later urban phase that have been excavated at Harappa, Mohenjodaro, and other sites.

Some scholars have argued that because of the absence of elite burials the society was not really divided into classes of elites and commoners, but many other categories of evidence do not support this argument. For example, many settlements became separated into two or more mounded areas, with one mound often being much higher than the others. The separation may represent the division of different communities into separate neighborhoods or the elevation of the elite to a high place overlooking the main settlement. This explanation assumes that the society was segregated into distinct living areas defined by ethnic affiliation, social status, profession, and the like.

The division of a town or city into two separate areas became a common feature of the Mature Harappan civilization. The beginning of this custom in the Early Indus times is unmistaken. The excavations at the sites of Amri and Kot Diji found two distinct habitation areas, one of which may have been surrounded by a massive wall. At Amri the wall was made of sun-dried brick, and at Kot Diji it was built with stone. At both sites, the process of segregation was not abrupt but occurred over hundreds of years and many phases of rebuilding.

House size and complexity is another indicator of different classes or social stratification. At Mehrgarh and also at Nausharo, some six kilometers to the south of Mehrgarh, large houses with

many rooms are distinct from smaller structures, indicating different classes of people and a hierarchical division of classes. The most convincing evidence for different classes of people and different ethnic groups is economic and technological specialization, combined with regional styles of artifacts such as pottery. Farmers were probably becoming distinct from fisherfolk and herders, and rural populations were becoming distinct from people living in large settlements. Each of the major crafts probably developed into specific ethnic or social classes. Even within these crafts there would have been a hierarchy of communities. Society was gradually divided into those who had access and control of crafts and the artisans who were producing various commodities.

The evidence for social and economical stratification of society at this early stage of development, as outlined above, is substantial. However, we do not see as clear and overwhelming evidence as it is available for Mesopotamia and Egypt. There are no palaces, there are no temples, and there are no lavish burials. It is the opinion of this author that the question of social stratification, important as it is in the development of an urban society, has been needlessly stressed. One can feel the impulse for seeing the cultural developments in the Indus Valley on the part of some scholars through the prism of Mesopotamia and Egypt with which they were more familiar. The modern archaeologists and prehistorians do not generally suffer from this ailment but they are somehow afflicted with the romantic notion of a 'living' Indian civilization whose roots go back as far as the Early Indus period. These authors conveniently draw parallelism between the cast-ridden society of present-day India and a likely social structure of the past, from which this structure presumably developed. Specialization in arts and crafts, the availability of agricultural surplus, the control and distribution of this surplus, and the natural highs and lows in the possession of wealth are the necessary conditions for urbanization, but to say that the whole society somehow became stratified into well-defined and segregated groups of people at this early age is rather far-fetched.

It will be obvious from the above description that during this stage of development, the preconditions for the development of cities and statelevel societies were fulfilled in each of these cultures in slightly different ways and different combinations. When taken all together, they present a fairly clear picture of the origin of Indus cities and culture. Although the Western audience has become infatuated with the quest for the earliest city or the oldest copper tool, etc., it is not necessary in the present context to focus on specific dates and sites. Similarly, while some western scholars, especially of the older generation, are hard at work to detect the 'diffusion' of civilization from the west, one should feel at home in looking the signs of coming urbanization within the local Early Harappan cultures, described above.

The Early Harappan (or the Early Indus) cultures instead of being viewed as a period of consolidation and maturation of village farming communities, their growth, and their expansion, are now being studied in terms of the development of incipient urbanization and all that goes with it. This includes improvements in technology, increase in trade and exchange, intensification of specialization, and high concentration of population at some key sites. Although no one believes in the linear progression of any of these regional cultures and their transformation into the Harappan tradition, there are more and more scholars who agree that somehow each of these cultures, especially the Kot Diji culture, contributed to the rise of Indus Civilization. Of course, some regional cultures adopted the new urban culture more readily than the other. Some areas were entirely submerged in the new, more urbanized, civilization while others were only wetted partially. In short, all of these regional cultures seem to be the foundation of the urban civilization that was to come and that is the main rationale for calling this period the Early Indus or Early Harappan period.

The Transition (2600-2500 BC): Around 2500 BC, these Early Harappan settlements and the society of their inhabitants seems to undergo a radical transformation, resulting in the emergence of an urban civilization and a complex and highly organized society. Many changes, for example in craft specialization, were more of degree than of kind, but there were also significant innovations and transformations, such as the emergence of writing and the beginning of sea trade. Evidence is slowly accumulating to show that this transition period, intervening between the cultural diversity of the Early Harappan period and the full-blown urban phase of the Indus Civilization, was brief, a century or a century and a half. While the transition was complete in some areas by 2600 BC in others, such as the eastern region, it is probable that the Mature Harappan phase started later.

These developments do not change the basic paradigm, only enhances it. Still, compared with the Early Harappan villages, the urban centers were a totally new context for interaction and display, and the Indus artisans met the challenge by creating a wide variety of utilitarian and ornamental objects. Each one of these crafts contributed in some way to the overall structure of the Indus cities, by linking some communities and distinguishing others. Complex technologies and rare materials allowed the creation of valuable objects that served to differentiate the ruling elites from the common people. At the same time, symbols of Indus religion and culture were incorporated into pottery, ornaments and everyday tools in a way that helped to unite people within the urban centers and link them with distant rural communities.

More than three-fifths of Early Indus settlements, such as Balakot, were abandoned during the transition: In Cholistan, for example, only four out of the thirty-seven sites identified continued to be occupied (but never “matured” into an urban culture). Many of the excavated towns were destroyed by fire: These included Kot Diji, Amri, Nausharo, and Gumla. Kalibangan was also abandoned but here an earthquake was the probable reason for the town's destruction and abandonment. When these settlements were reoccupied, both local and Mature Harappan pottery styles were in use for a while, suggesting the introduction into the local culture of a new tradition developed elsewhere. Some of these towns were replaced by new settlements in the same location, sometimes in a short period of time, sometimes after two or three generations, but most of the earlier settlements were not reoccupied. Instead, there were a great many new foundations, including more than a hundred and thirty in Cholistan. Those established in Sindh possibly included the great city of Mohenjo-daro. (There is disagreement on the date of the waterlogged earliest levels there, known only from small soundings, though the pottery from the earliest levels is probably of the Kot Diji period.) An important exception to the general pattern was Harappa, which, far from being abandoned, enjoyed continuous development from the Kot Diji period into the Mature Harappan period, during which features characteristic of the Indus Civilization gradually emerged.

Many of the new settlements seem to have been constructed according to a plan, with wide, cardinally orientated streets, brick wells and drains, and well-appointed houses using bricks made to a standard size. In the larger settlements, baked brick was frequently used for construction as well as mud brick. Often these settlements had a surrounding wall; for example, a substantial mud brick wall was constructed around Nausharo, which seems to have taken over from Mehrgarh, now abandoned, as the regional center of the Kachi plain. Kalibangan was transformed from a single-walled settlement into a town with an elevated mound (citadel), divided into two walled sectors, and a lower walled town to its east, an arrangement found in a number of other Indus settlements.

Mohenjo-daro was constructed in part on massive clay and mud brick platforms, as a defense against

the prevalent risk of flooding. Platforms were also constructed at Harappa and the town underwent considerable growth. At Dholavira in Gujarat, which had seen a small earlier occupation, a massive wall was built to enclose a new planned settlement whose residential area later expanded onto open ground north of the walled settlement. These three settlements suggest the emergence during the transition of regional centers, a higher tier in the settlement hierarchy. Another such center was founded at Ganweriwala, sited in the Ghaggar-Hakra plain equidistant between Mohenjo-daro and Harappa; unfortunately, because this has not been excavated, nothing is known of it except that it attained a size of 80 hectares or more during the following Mature Harappan period. Rakhigarhi, located in the Divide, is often cited as another regional center but there is no published report on it. At a similar distance from both Harappa and Ganweriwala, Rakhigarhi is portrayed as the fifth regional center. The excavations there have not distinguished a separate transitional phase, but there is a marked contrast between the Sothi-Siswal settlement and the huge walled settlement which is claimed to be Mature Harappan.

In southern Sindh, some of the large Early Harappan villages maintained their individuality for quite sometime, despite the appearance of the Harappan culture. This alone explains the Harappan pottery at the Kulli sites and the PreHarappan ceramics in the early Mohenjodaro levels. At Kalibangan, the coexistence of the preurban as well as the Harappan pottery is unmistakably documented although the question of transition is rather moot. The Harappan phases at site like Kot Diji, Amri, Kalibangan, and Mohenjo-daro should not be understood as one culture supplanting another, but like a city corporation taking over a suburban village to urbanize it. During this transition period, the Harappa culture, though essentially derived from the Early Harappan cultures, continued to be coeval with the latter. Although it is an exaggeration to say, in many ways the Early Harappan and the Mature Harappan cultures can be considered two faces, one urban and the other rural, of the same cultural phenomenon.

At the same time other signs of greater complexity were emerging. Within these cities and towns the range and sophistication of craft activities greatly increased, and there are indications of developing specialization. The development of special craft objects, of exotic or rare materials or of fine or time-consuming workmanship, and the appearance of artifacts ideologically endowed with special significance reflect increasing status differentiation. New styles and varieties of artifacts appeared, including metal vessels, and bronze came into widespread use. The various regional styles of pottery and other artifacts were superseded by standardized Mature Harappan products after 2600 BC.

Some regions were less closely integrated: the inhabitants of Saurashtra and the North Gujarat plain ("Sorath Harappan" of Possehl) and southern Baluchistan (Kulli culture) maintained their own character, showing some significant differences from the classic Mature Harappan culture in Sindh and other core regions. Kot Dijian material continued in use (Late Kot Diji period) in northern Baluchistan, where Rehman Dheri flourished as a regional urban center, and was quite distinct from the culture of the plains. Mundigak became part of the Helmand culture, and the major route through Central Baluchistan, which had linked the Iranian plateau and Turkmenia with the Indus plains, was abandoned.

There are tell-tale signs that the whole Harappan civilizational zone have had a definite overarching ethos, overriding the regional differences mentioned above. We do not know how this common ethos developed and how it was maintained but there is no doubt that it was a reality. The standardization of goods, enforcement of a definite system of weights and measures, and above all formulation and

execution of municipal rules in the cities, speak of the emergence of a political system that must be credited to a determined community of people whose main support lay in the surplus of the Indus plain, but whose prosperity depended on the growth of the industrial urban centers and a peaceful atmosphere for common good. Such an enterprising people must have felt the need to develop a system of writing to meet their commercial and administrative requirements. As will be explained subsequently, there is no earlier beginning of writing except for some symbols found at random on potsherds. Surprisingly, these writing symbols are common throughout the Harappan Zone irrespective of the cultural antecedent.

On the other hand, as indicated previously, there are some aspects of culture that the Indus Civilization shows no precedents, but they are again so individualistic and rooted in the local fauna and flora that, as far as material content is concerned, it wholly derives from the local elements. An extremely interesting development is the production of steatite seals which have no earlier precedents, but depict local art and writing. The purpose of these seals is not at all clear. If they were meant as signet seals for stamping on commercial goods, pots and other objects, they may have had administrative significance.

The Early Harappan phase has little evidence for architecture other than domestic buildings. The so-called "fortification" wall at Kot Diji may be an exception to this observation, as might the "fortified character" of Kohtras Buthi in the Sindh Kohistan. The Pre-urban Phase mound at Kalibangan is also surrounded by a wall. The socalled "fortifications" at Tharo Hill in Sindh do not sustain that judgment when examined in detail. And the remains at Dhillanjo-kot in the same region are not sufficiently well understood to make a judgment in this regard (8). Thus, of the 463 Preurban sites there are 3 that may have a substantial circumvalation. This is hardly an impressive statistic, and Piggott's 1950 observation for the Amri sites still holds as a generalization for the Pre-urban Phase: " . . . Villages appear to have been undefended by walls or ramparts" (12).

During the Urban Phase, however, the organization of many Harappan cities and towns is based on the clear demarcation of public versus private space. The development, or possibly only the florescence, of the "citadel " set apart from actual living space at a number of these sites can also be mentioned. And, the possible granaries or warehouses, within the public areas, perhaps indicative of some form of redistribution, are significant as well. It can also be observed that the complex engineering and maintenance of the extensive public street-drainage system of Mohenjodaro carries with it a number of implications for the growth of "public" or "civic" institutions during the Urban Harappan. Simply maintaining the system so that it was not clogged must have been a significant, and probably distasteful, job. Perhaps more important was the constant task of maintaining a proper drainage slope to the entire system as the "tell" of the city grew and changed its contours across "neighborhood" boundaries. Once again we have evidence for an important "institution" that is nowhere suggested in the Early Harappan Phase (8).

The Early Harappan Phase exhibits little evidence for any degree of social differentiation. Full-scale excavations within this period have been undertaken at Amri, Kot Diji, Kalibangan, and Balakot. In addition, Dani worked at two Preurban sites in the Gomal Valley, and the University of Peshawar excavated at Rehman Dheri. While additional horizontal excavation is certainly called for at pre-Urban Phase sites, what we see as a result of work that has been done is a remarkably uniform inventory of material culture couched within a village structure. There are, of course, differences in the stylistic attributes of these Early Harappan settlements. The ceramics, for example, can be

organized into stylistic regions. There might be some differences in other artifact classes as well, but this variation does not change the underlying uniformity or the minimal level of sociocultural differentiation. There is simply no evidence that the Early Harappan Phase encompasses the beginnings of the Urban Harappan elite class or classes.

The Urban Phase of the Indus Civilization exhibits unambiguous evidence of social differentiation. The presence of substantial architectural features, such as the Great Bath and Warehouse at Mohenjo-daro, suggests patterns of use not open to the bulk of the city's population.The limited number of stamp seals seems to indicate that not everyone possessed these splendidly crafted, probably "expensive," items. The evidence of large-scale craft specialization at Mohenjo-daro, Chanhu-daro, and Lothal, set within their own "districts", further suggests a degree of occupational differentiation of the population not seen in the Pre-Urban Phase. Social differentiation is also evidenced by contrasts of big house/little house, baked brick house/mudb rickhouse, and city dweller/village dweller that are clearly present in the Urban Phase and can only be noted here. Finally, the presence during the Urban Phase of truly sumptuous items of personal adornment, such as the necklaces found at Mohenjo-daro and Allahdino, and a growth in the use of precious metals and beads are indicative of differential access to wealth, productivity, and abundance (8). It may, however, be noted that the social stratification and differentiation noted in the Harappan cities is not as robust as it is seen in other contemporary civilizations. This is why Fairservis was prompted to say about the Harappan Civilization as “more village-like than city-like”.

The emergence of the Urban Phase brings about changes in settlement pattern. First there is an increase in total number of sites. Second, there is a two-tier Harappan settlement pattern, with three regional centers or ‘capitals’ (Mohenjodaro, Harappa, and Ganweriwala) developing as a part of the emerging Urban Phase. The two-tier settlement pattern is not visible in not so c;lear in the Early Harappan phase.

The development of seals is another aspect of the cultural transition. Although seals by themselves are known from the Early Harappan phase, it is their sophistication and number that distinguishes the Urban phase from the Early Harappan. The seals provide us with many animal figures and human scenes that apparently had religious and mythological significance. Such a use of religious symbols suggests a religion-oriented society, though little evidence has been recovered for institutionalized religion in the architectural remains of the Harappan cities. Some of the features of the religion can be derived from the earlier rural-based social systems but no regional signatures are noticeable.

There is no evidence for the gradual, logical evolution of the Harappan script or of the unified system of weights and measures that appears within the Harappan domain during the Urban Phase. The Early Harappan Period has yet to produce prototypes for the square Indus stamp seals or an iconographic system even remotely envisioned as the precursor of the distinctive Indus script (see Section III for details). This sudden appearance of writing is, of course, a marked contrast to the gradual evolution of the Mesopotamian system. There is some similarity between the Indus writing system and the Proto-Elamites script, suggesting that the Harappan peoples derived their writing from these neighbors to the west (see Section III). The system of weights and measures has no parallel, but that it was an effective system may be best suggested by the fact that the merchants of Dilmun adopted it as their own during the second half of the third millennium.

The rapid appearance of stratification of the Harappan society and the emergence of writing are two

indexes of sociocultural complexity which are of particular importance to any emerging position on the rise of Bronze Age urbanization in Pakistan. Literacy and social classes, especially the implications that flow from social differentiation, are the two critical axes on which an evaluation of the growth of the Harappan Civilization can proceed. While the degree of social differentiation continues to be something that must be inferred from other archaeological observations, the growth of writing is something that can be directly observable in the archaeological record, just as it has been in Mesopotamia (8).

In summary, the rural Indus had a major role to play in the make-up of the Harappan Civilization but once in place, the urban centers must have served as strong cultural foci to homogenize large aspects of material and spiritual culture of the Greater Indus Valley. Whereas a manifest continuation of cultural traits from the Early Harappan culturtes to a composite culture of the Harappan Civilization is clearly visible, there are a number of innovations that simply did not exist in the antecedent cultures. The precise mechanism that brought about the emergence of the Indus civilization is not known but there is no doubt that the society that had crystallized around a common culture around 2500 BC was significantly different from that of the Early Harappan period, in scale, organizational and social complexity, cultural uniformity, and ideology or ethos.

An Abruptness of Change: Perhaps the most interesting feature of the transition between the Pre-urban and Urban Phases is the abruptness of the change. The succession from the Preurban Early Harappan to the Urban Phase has been revealed at Balakot, Amri, Kot Diji, Nausharo, Kalibangan, and Harappa. Balakot appears to have been abandoned between the Early Harappan occupation and the succeeding Mature Harappan. The same may be true at Kalibangan. Kot Diji has produced mixed levels with both Mature Harappan and Early Harappan pottery; but this appears to be an artificial context since the excavator claims that "during the course of long settlement on the citadel mound later material fell from the top and became hopelessly mixed-up with early elements . . ." (29). At Amri, however, a case can be made for stratigraphic continuity between the end of the "Amrian" occupation and the beginnings of the Mature Urban Harappan at the site. Two rather unsubstantial building levels exist in Amri II, a transitional period between the Early Amrian and Mature Harappan. No radiocarbon determinations are available for these levels, but a 75-100-year average life for mudbrick structures suggests something on the order of 150-200 years for the two occupations and this estimate is reasonable for the critical period being considered here." The same continuity has been presented by excavator Jarring (30) for the site of Nausharo, where Period II shows clear similarities to Amri II. The Pre-urban occupation at Harappa has also been exposed in a significant way by the excavation team directed by Kenoyer and Dales, and later by Meadow. Once again it is suggested that there is transitional material bridging the Preurban and Urban Phases of the Harappan Civilization.

Shaffer and Lichtenstein (31) have reviewed the radiocarbon dates for the Indus Valley and Baluchistan, and they reach the same conclusion. They suggest that the Harappan Civilizationis a fusion of Hakra, and Kot Diji traditions. This fusion appears to have been very rapid, reinforced no doubt by its own success. Possehl (32) suggests a rapid origin of 150 years for the Harappan. In another paper he suggests it was Harappan. In another paper he suggests it was 2500 BC. Whatever the Harappan group's organizational complexity, it was a cultural system promoting rapid territorial expansion (31). This rapid distribution rate was matched only by later Harappan abandonment of large sections in the Indus Valley which was underway by *ca.* 2000 BC, a process intensified by later cultural changes.

This is an exceptionally short time for a major cultural change, such as from the Early Harappan to full-blown urbanization of the Indus Civilization. It is rather difficult to explain as a purely indigenous process but several opinions to that effect have been offered. Adams (33) has made an important contribution to the growing realization on the part of archaeologists that not all cultural change can be understood in terms of gradualist, evolutionary processes operating at the societal level, or by considerations of smallscale change punctuated by vaguely stated diffusionary processes. He suggests that research strategies be broadened and diversified to consider the creative potential of situations where the impact of goal-directed behavior on the part of individuals controlling key social positions is amplified, and to consider situations where the process of change is very rapid, leading to wholesale modification of the sociocultural structure.

There are a number of ethnohistorical accounts of places where this kind of change has taken place. Perhaps the best examples are in West Africa in the 18th century, where rapid state formation took place within the context of slave trade and 18th and 19th century North America. Using a broadly conceived notion of trade, Adams holds that in these historical cases, and many others, "involvement in trade can bring in its wake, rapid massive changes in the structure and technological equipment of a society" (33).

Focusing to some degree on the Mesopotamian contact with ancient Pakistan (known to them as Meluhha), trade, broadly speaking, may have played a significant role in the century of paroxysmal change that seems to have led to the development of Indus urbanization (8). A shift in the basis of trade or in its volume/intensity has been shown to: (34)
1. It leads to the re-evaluation of resources. This lends new meaning to patterns of ownership, access and distribution.
2. It enhances the potential for social stratification, especially for those in key social positions (such as lineage leaders or others) through whose offices material property is frequently moved and in whom property rights may be vested.
3. It brings into play heightened competitive forces which can result in the creation of increased social distance between competitors, be they individuals or groups.
4.It brings new advantages for occupational or careers specialization, especially for craftsmen and those involved in resource extraction or processing. Others in key social positions who control distribution and may be able to regulate extraction/expenditure cycles are in particularly advantageous positions in this regard.
5. It increases tendencies for population agglomeration to take advantage of economies of scale, enhanced defensive postures and the like. This in turn can promote the development of new forms of social control and brings with it new requirements for the regulation and regularization of economic, political and religious processes.

While it is clear from the historical sources outlined by Adams, and noted above, that trade or intense economic processes can have a revolutionary impact on sociocultural systems, there is some reason for archaeologists to direct their attention to another possibility. This is the vast, complex field of human ideology and belief systems - what Redfield referred to as the "Great Tradition that describes a way of life and as such is a vehicle and a standard. . . [enabling] those who share it to identify with one another as members of a common civilization" (35) . Emphasizing the ideological content of complex societies, Redfield goes on to note that the urban revolution involves to some significant measure "the transformation of the folk society into civilization through the appearance and development of the idea of reform, of alteration of human existence, including the alteration of man

himself, by deliberate intention and design" (36).

Doubting Thomases: The problem of the origins of the Indus Civilization still remains. Did the Early Harappan technological and economic base - its grid-patterned cities, often with 'citadels' separated from the 'lower town', extensive copper-bronze metallurgy, monumental architecture, elegant craftsmanship in stone, wide trade contacts, elaborate systems of weights and measures, and the art of writing - lead by itself to the Indus Civilization? Or, did the people of the Indus Valley received a strong stimulus from the west?

Although the Harappan Civilization growing in the fertile soil of the Early Harappan is now almost a consensus view, there are still some dissenting voices. For examples, Gupta (37) has pointed out that traits like terracotta cakes, fishscale design, etc., in an 'Early Harappan' context, may very well be due to a full-fledged Harappan contact with these areas. At Kot Diji, level 9 may be dated by radiocarbon around 2350 BC, a date which is well within the full blast Harappan culture. Agrawal argues that the pre-Harappan settlers could well be the rural faces of the Indus Civilization (38), and not a separate culture antecedent to the Harappan.

Gupta (42) also pointed out that even if one assumes that the 'Early Harappan' base led by itself to the Harappan Civilization, at least two phenomena remain which are difficult to explain. How is it that at sites like Amri, Kot Diji, Gumla and Kalibangan the 'Mature Harappan' level does not smoothly and imperceptively succeed the 'Early Harappan' level? At Amri there is a transitional phase where the typical Amri and the typical Harappan elements are found together. At Kot Diji, and also at Gumla, there is burnt deposit separating the two and, at Kalibangan, the Harappan level is a clear, equally unrelated superimposition on the earlier level, after an earthquake. There is also a 'layer of destruction' between Periods III and IV at Gumla; Period IV being the Harappan.

It was pointed out by Allchins, in 1968, and recently emphasized by Lambrick, that the 'Early Harappan' settlements are not on the active floodplain of the Indus. Even Amri lies on the edge of the plain and Kot Diji is on an outlier of the Rohri range of the hills. As Lambrick cogently puts it, 'the decisive step forward in the context of Sindh was the building of a town well out on the floodplain' (43). lt seems that this decisive step was taken by the 'Mature Harappans' and not by the 'Early Harappans'. In the present stage of knowledge none of these problems can be satisfactorily answered.

About the grid-planning, Stanislawski pointed out, long ago, that it was possible 'only in a totally new urban unit or a newly added subdivision' (41). It is not conceivable except as an organic whole. This grid-plan cannot be explained by referring to a continuity with any pre-Harappan settlement. At Kalibangan even the orientation of houses, in the pre-Harappan level, differed from that of the Harappan houses. Regarding technology, it should be noted that copper objects are rather rare in the pre-Harappan assemblage with no definite proof of copper-smelting. When one contrasts this with the elaborate metal inventory and developed metallurgical process of the Harappans the comparative suddenness of the Harappan metal tradition becomes apparent (7).

A considerable emphasis has been placed by Mughal on the occurrence of graffiti from Jalilpur, Kalibangan and Amri as a sort of antecedent stage of the Harappan writing. Other scholars say that as a cultural proposition, it is not worth anything because, as Mughal's discussion itself shows, their number is extremely limited. Furthermore, a writing system either exists or it does not: there is no half-way stage and it would be futile to look for it in the Early Harappan phase. Furthermore, the Harappan sculptural and bronze artistic tradition, though limited, suggests a maturity and

sophistication which cannot be explained by anything pre-Harappan.

Another major stumbling block that impedes any rational explanation for the 'origin' of the Harappan Civilization is its explosive evolution, i.e. The Mature Harappa culture seems to appear on the scene with a deceptive abruptness. A n easy way to explain the suggestion of an explosive evolution of the Indus Civilization would be, as it has so often been in the past, to invoke the factor of external stimulus, be it from Mesopotamia or from anywhere else. Lambrick (43) has even gone to the length of suggesting Judeir-jodaro as a probable place where this stimulus might have had an early shape.

In spite of the undeniable evidence of cultural continuity from the Early Harappan to the Mature Harapan phase, the 'outside influence' factor still resurfaces in different forms. While acknowledging the indigenous roots of the Harappan Civilization, some archaeologists still invoke Sumerian influence. Attempts have been made to connect the pottery traditions of the Harappan tradition with those of Mesopotamia and eastern Iran. Lamberg-Karlovsky (39) suggests that the emergence of an early urban interaction sphere in *ca.* 3000 BC in Turkmenia, Seistan, and south Afghanistan had an important role to play in Harappan urbanism. Shereen Ratnagar (40) suggests that Indus-Mesopotamian trade played an important role in the rise and decline of the Harappan civilization. Such theories are difficult to accept in the absence of substantive evidence but one must keep one's mind open. One may only note that invoking external stimulus in a vague, undefined way absolves the archaeologist of any responsibility to explain or look for culture-change in internal terms in any situation where the data are inadequate (7). As Renfrew put it:

"This problem of establishing whether a specific innovation was learnt by a particular community through contact with its neighbors, or developed locally without such stimulus, interesting as it is, has only served to obscure more fundamental ones in the explanation of culture change .... In order to explain changes in culture, in the organization and life patterns of particular communities, the genesis of specific innovations is not the fundamental problem. More central is to explain how and why innovations of one particular kind came to be accepted at that time and at that place, where previously the community did not take to them. Such an explanation may require information about the entire functioning of the community - its subsistence, its demography, its social organization and so forth."(quoted by Chakrabarti in ref.7).

There will be no meaningful insight into the Harappan growth process till the research on pre-Harappan 'and Harappan levels is much more detailed and problem-oriented than what it is now. Till then, invoking external stimulus will be as inadequate a culture-explanation as suggesting a straight causal relationship between the preHarappan and Harappan levels on the existing evidence (7).

Conclusion: In this chapter we have reviewed the formative stage of the Indus Civilization, and we identified this time as the Early Harappan period covering a time span between 3,200 BC and 2,600 BC. With so many of the major sites still largely unpublished, with so many of the excavations themselves only partly published, with so many sites not excavated at all, and with so many claims for the discovery of the "Harappan" or "pre-Harappan" sites in the eastern borderlands, it is still impossible to make a judicial analysis, or fully comprehend the meaning of the Early Harappan period. We can, however, at least go some way in this direction and this is what has been attempted here. From all this evidence we conclude that, whatever the changes that occurred between the development of agricultural villages in Baluchistan and the Mature Indus Civilization, and however they are to be accounted for, the Early Harappan stage must be seen as the formative period, the stage

of consolidation, the stage of incipient urbanization, the stage of unprecedented expansion, in short a prelude to civilization.

Conclusion: This then is the outline in brief of what we know archaeologically and what we might assume as to the broad cultural evolution in Pakistan in the time period which saw the rise of an urban civilization in the Greater Indus Valley and its adjoining areas. What we have is further summarized:
1) 7000-4000 B.C.: a multiplicity of huntinggathering groups differing in culture because of a variety of ecological adaptations and geographic distribution.
2) From ca 4000 BC. to 2300 B.C.: the movement

of people belonging, one assumes, to the same language family, into the Indus and GhaggarHakra plains, creating dialectal differences because of increasingly remote settlement concentrations. This has two aspects, an earlier diffusion of basic village farming and pastoralism and the later developed village complexity of culture presumed to emphasize pan-village sodalities.

3) The Harappan Civilization is the consequence of this developed village farming continuum and it was largely an indigenous development. It was not unaffected by outside influences, however, especially where alluvial plain of the Indus meets the highlands to the west, thereby linking the Iranian Plateau to Baluchistan and western Sindh.
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Chapter IV.2

The Decay and Demise of the Indus Civilization*



The Indus Civilization flourished for about five hundred to seven hundred years. In the late third millennium BC it started to wilt and shortly after came to an end. This process was marked by the disappearance of the features that had distinguished the Harappan Civilization from its predecessor cultures: writing, city dwelling, some kind of political control, regional and international trade, occupational specialization, architecture, and widely distributed standardized artifacts. The cultural uniformity of the Mature Indus Civilization gave way to a number of regional groupings, often using material reminiscent of that belonging to the Early Harappan phase in each area. While there was considerable depopulation in the Indus heartland, settlements increased in number in Gujarat and the Indo-Gangetic Divide, and other communities were established in areas well outside those occupied by the Mature Harappan people.

Early in the second millennium BC, by about 1800-1900 BC, the city of Harappa and its counterpart in Sindh, the grand city of Mohenjodaro, were no longer functioning urban centers. The urban life as a complex socioeconomic system disintegrated, replaced by a simpler existence. Human life continued on the Indus plains and the hilly slopes of the surrounding area but the people were no longer organized by class and occupational specialization. Population contracted, a large number of settlements, including Harappa and Mohenjo-daro, were abandoned, but some newer, smaller, and simpler settlements were established. While there was continuation of life, there was also much change. The people seemed to adopt new customs and living habits, their beliefs apparently changed, and what little we know about this period, some new peoples started to make inroad into the Indus territories and under their influence the Indus languages and culture started to change. Gone were the town planning, gone were the sewage system, gone was the script, gone were the peculiar Indus seals, and gone was the Indus style in pottery form and decoration.

The archaeological phenomena we identify as Harappan - baked brick houses, steatite seals carved in intaglios with high, pierced bosses, weights of a specific and uniform standard, long cylindrical carnelian beads, and sturdy red pottery in a set of recognizable shapes among other features - cease to appear in the archaeological record of the centuries between about 1900 and 1700 BC. Cubical weights for trade fell into disuse, and the international trade networks began to deteriorate: there were no more trade caravans going northward and there were no ships sailing to Delmun or to Mesopotamia. Shells from the coastal regions no longer made their way to the northern sites, and lapis lazuli from the north failed to reach the sites in the plains. In Mesopotamia the texts that had recorded ongoing trade with a region called Meluhha, which is most probably the Indus Valley, no longer mentioned it. Additionally, a very large percentage of Harappan villages and towns were

deserted during or before that period, so that no vestiges of subsequent cultures are to be found at them..

The disintegration of the urban culture means the end of an integrated and complex social, economic and political network, carrying with it a decline in social stratification, erosion of economic specialization, the eclipse of regulatory institutions and the flow of information, the city life that embodies the sophistication of the civilization, and, ultimately, what Tainter (1) calls the epiphe

*This chapter is partly based on Shereen Ratnagar's *The End of the Great Harappan Tradition*, published in 2002 nomena: the public monuments and art production. Paradoxically, it is often these 'epiphenomena' by which ancient civilizations are known to us, and it is their disappearance in the archaeological record which we miss with this civilizational collapse (2).

Previously scholars argued that the Indus cities were suddenly abandoned around 1750 B.C., but the recent work by Harappan Archaeological Research Project (HARP) has clearly demonstrated that during its late phase, from 1900 to 1500 B.C., Harappa was indeed inhabited. In fact, signs that drain and city walls were not maintained provide proof of crowding and a breakdown of civic order. The remains suggest that the ruling elites were no longer able to control the day-to-day functioning of the urban center. This loss of authority must have eventually led to reorganization of society, not just in Harappa but throughout the entire region, that the upper classes, which had dominated for 700 years, had lost all controls. Similar changes were occurring at the other big cities such as Mohenjo-daro to the south and sites like Dholavira in the Southeast.

What happened? There is no one answer to this question. The issue is still being debated but not as vigorously as other civilizations, such as Mesopotamia, Inca, and Maya. In the meantime, what can we say is as follows: The Indus Civilization arose as a social, economic and cultural phenomenon, produced by the build-up of population on the fertile Indus plains and the hilly slopes of the surrounding areas in the west. The resultant urban society was a delicate balance of internal relations between cities, towns and villages, and of external relations with neighboring peasant and pastoral societies as well as with more distant urban cultures to its west. The end of the Indus urban phase was probably triggered by some major upset of this balance. Such an upheaval could have been produced by any one or more of the causes one can imagine, operating either alone or in combination. In other words, just as the creation and maintenance of the system was the outcome of the successful combination of several factors, so too its breakdown could have been caused by the weakening of anyone of these or the upsetting of their harmonious balance and interaction. Whatever the causes or enabling factors may have been, it is obvious that at a certain point in time the urban phenomenon came to an end. There is no use in calling it a ‘transformation’ as some of our archaeologists are presently prone to do (3,4). Civilizations arise, they also fall and come to an end. So was the Harappan Civilization or, in fact, the whole Indus Age.

There is the Early Harappan (the pre-urban period of the Indus Age), there is the Harappan (the Mature phase) and there is the Late or postHarappan (post-urban cultures) and they are not the same.

The Harappan Civilization collapsed but we should not assume that all aspects of life associated with the Indus culture came to an end. The aspects related to the urban living did disappear, but others, connected with basic subsistence practices and technologies seems to continue. Those social institutions that were created to forge ties between non-kin and between distant settlements crumbled but the remnants of the kinbased relationships that we note in the Early Harappan cultures continued to

exist. The Harappan Civilization did not disappear suddenly, as was assumed till a few decades ago, and some elements of this civilization can be found in later cultures. Current archaeological data suggest that material culture classified as Late Harappan may have persisted until at least ca. 1300 BC in Gujarat and was partially contemporaneous with the Painted Grey Ware culture in eastern parts of Pakistan and in some parts of western India.

As we shall discuss in the followings, some archaeologists, especially in India, are emphasizing that, just as in many areas of the world, there was a continuous series of cultural developments, without any cultural break. This interpretation of post-Harappan history is, however, a matter of debate. First, the increase in the number of

"Harappan" settlements in India across the Divide and Gujarat may not be Harappan after all. Instead, they are more like Neolithic settlements with some minor vestiges of the Indus rural culture. Second, there is no obvious signs of a "cultural

continuity" between the demise of the Harappan culture and the rise of simple agricultural villages across the border. Third, there is long period of time between the end of the Indus urbanism and the rise of towns and cities in the Indus Valley and the Ganga-Jamuna plains. Fourth, the reemergence of towns and cities in the subcontinent did not begin in the Gangetic plains, cities reemerged first in the north of Punjab, in the socalled Gandhara country, and these cities, such as ancient Taxila, had no cultural familiarity with any of the Harappan cities. The attempt to connect the emerging post-Harappan urbanism in India with the the Harappan Civilization is, therefore, a corruption of history and a transparent attempt to project the 'Indian Civilization' into antiquity.

The chronology of the decay and demise of the Harappan Civilization is pretty much in dispute. Many aspects of the problem are related to the almost casual definition of the Harappan, sometimes innocently but most of the time deliberately, by some Indian archaeologists, such as Lal, Rao, Joshi, Dishkit, and their students, who have excavated in Gujarat and the Divide. Some western archaeologists, particularly Possehl, Kenoyer, Meadow, and before them, Dale, are also casual in their approach and have unwittingly followed these leads. As long as the criteria of the Harappan Civilization is not fixed and consistently adhered to, there is no hope that the date on the tail end of the Indus Age could be fixed in any meaningful manner. There is the Early Harappan (the pre-urban period of the Indus Age), there is the Harappan (the Mature phase) and there is the Late or post-Harappan (post-urban cultures) and they are not the same.

Archaeological studies, recording the cultural changes in the terminal phase of the Harappan Civilization is an interesting subject, so is the musing about the non-urban regional cultures that replaced this splendid urban civilization - in effect, the legacy of the Indus Age. This chapter deals with these topics in some essential details. The speculation on the decay and demise of the Harappan Civilization - asking the question: What happened and Why - is even more interesting exercise; this topic, bordering on theory and the abstract, especially grabs our attention; we shall take it up in the next chapter.

The later part of the Harappan Civilization and its eventual demise was a momentous period in the history and a new cultural beginning in Pakistan as well as in India. Not much has, however, been written on the collapse or the end of the Indus Civilization or its decay and decline. More recently, the phenomenon has been labelled as the 'transformation' of the "Indus culture" from an expansive urban society to a number of regional cultures which took a long time to be on the road to urban

civilization again, but that did not solve the problem either; whatever has been written, deals with the "signs" and 'causes' of decline of urban culture in the Indus Valley rather than discussing the process of cultural transformation from an urban society to a collection of some regional non-urban cultures. Causes of the civilizational collapse have been extensively discussed but these analyses give pride of place to natural calamities such as floods or earthquakes, or to radical environmental changes as forces behind the end of this civilization. Furthermore, the issue of *why* and *how* has been commented on without putting it in a larger context of the cultural upheavals that many Bronze Age civilizations were experiencing at the same time period throughout the Old World. It is hard to find any reference to possible parallelism with other early civilizations which also rose and perished as did the Indus Civilization.

This situation is reflected in the fact that while scores of book length commentaries have appeared in the past half a century on the gemination and blooming of the Indus Civilization, only one (2) has appeared that deals with the wilting of this cultural phase. Another (5) is a collection of some extracts of already published parers, generally flogging the same dead horse of the 'Aryans'. This paucity of archaeological and interpretative literature is probably the result of the scarcity of archaeological research in the final phase of the Harappan Civilization and the ensuing of a long "Dark Night" of the subcontinental prehistory. Indeed, this presumed 'dark' period is oftentimes offered as an excuse for the obvious neglect of paying attention to the decay and decline of the Harappan Civilization and the eventual end of the Indus Age. In spite of this criticism, there is enough material available that allow us to have a floating peek into this period of momentous importance. In this chapter, we generally follow Ratnagar (2), who is probably the only archaeologist to tackle the end of the Indus Civilization in a comprehensive manner. This is, however, not to say that we have ignored the input of other researchers who have, in one way or the other, shed useful light on the subject. It should be noted that our focus is on theoretical issues, the changes in material culture have already been discussed in Volume III (*Harappan Civilization - The Material Culture*).

The *Fall*, the *Collapse*, the *Demise*, and the *End* of the Indus Civilization or the *Decline*, *the Decay*, the *Decadence*, the Cultural *Transformation*, and *Localization* of a Culture?

There is much debate on the terminology of the Harappan Civilization and its aftermath. The final stage of the civilization has been categorized as its *decline*, *decay*, *decadence*, and increasingly, as *cultural transformation*, (3,4). The end of the Indus story has also been written as the *end*, the *demise*, the *fall*, and the *collapse* of the Indus Civilization. This terminological problem arises from the conceptualization of the post-Harappan landscape. It also represents different interpretative orientations which have some important theoretical implications.

The distinction between terms such as decline, decay, decadence, and cultural transformation on one hand and, on the other hand, terms such as fall, collapse, demise, fragmentation, and death is too easily glossed over. Those in the former group imply changes that are somehow for the worse, especially morally or aesthetically inferior, but not necessarily the end of anything. For this reason, a neutral term, the cultural and social *transformation*, has recently been coined. This terms is seen as value-neutral. Those in the latter group imply that some meaningful entity ceased to exist. Cultural transformation, at least what is implied in context with Indus archaeology, is a slow but perceptible cultural change where the existing culture transforms into another culture while still retaining a number of traits of the older culture. The new culture could be simpler or at par with the older culture but a cultural continuity remains in existence. A collapse, on the other hand, is a rapid and

catastrophic change of the existing order, invariably replaced with a ‘inferior‘ or much simpler order. Additionally, a clear cultural break is in view. In this sense, collapse can be considered as a drastic restructuring of social institutions.

In anthropological literature, the term collapse is increasingly used in context of sociopolitical order: a civilization collapses when the state or the empire collapses. We are not using collapse in this narrow meaning. For us, a civilization collapses when the generally acceptable criteria of a civilization, including the social and political order, collapses. We must realize, however, that decline and fall of a civilization are generally inseparable: civilizations invariably decline and decay before they catastrophically fall.

While the end of the Indus Civilization generally and the Indus Age in particular is more or less taken for granted, the notion that Harappan culture elements like the bullock cart and method of bead manufacture are still with us is accepted equally unquestionably. Some would even take the remains of the Harappan religion for granted. It is probably this premise that has prompted some scholars, such as Possehl and Kenoyer, to term this momentous cultural change as *transformation*, even *Localization* (3,4,6). The reader will note that the approach taken here differs from that of Possehl and Kenoyer, who emphasize the survival of Harappan traditions (disconnected ones, it may be noted), such as the bullock-carts, the binary-decimal system of measurement, the scored goblet, *and* the shape of the cooking vessel, the *Handi*. Possehl doubts that stratigraphic dead ends (the termination of a certain kind of material culture in the vertical sequence of a site) mean the end of tradition: “a state it was that died”, he argued in 1979, “not the Harappan Civilization or its pottery and other material constituents.” In contrast, we follow the line of thought of Shereen Ratnagar (2). Her argument, is that the civilization did indeed come to an end. Certainly some pottery forms, oral traditions, village cults, and the rural sciences of land use entailing knowledge of seed types, animal behavior, did not go into oblivion. But however many such elements we count as 'survivals', they are not tantamount to an integrated Bronze Age political economy. Certainly, it is the state that died but the Great Indus Civilization died as well. There is nothing peculiar with the Indus Civilization; “civilizations are borne, they also die” (2).

Collapse is a recurrent feature of human societies, and indeed it is this fact that makes it worthwhile to explore as a general explanation. The scope of this Section does not allow such an exposition in full. Our primary focus remains the Indus Civilization and we shall be content with the lessons that can be learnt from the collapse of some extraneous civilizations, the lessons that can possibly be used for explaining the collapse of the Indus Civilization.

What is Collapse? 'Collapse' is a broad term that can cover many kinds of processes. It means different things to different people. Some see collapse as a thing that could happen only to societies organized at the most complex level. To them, the notion of tribal societies or village horticulturalists collapsing will seem odd. Others view collapse in terms of economic disintegration, of which the predicted end of industrial society is the ultimate expression. Still others question the very utility of the concept, pointing out that art styles and literary traditions often survive political decentralization, thus there is no ‘collapse’ but a mere ‘transformation’.

Collapse is a general process that is not restricted to any specific type of society or level of complexity. Complexity in human societies, as discussed in greater detail in Section I, is not an all-or-nothing proposition. Societies vary in complexity along a continuous scale, and any society that

increases or decreases in complexity does so along the progression of this scale. There is no point on such a scale at which complexity can be said to emerge or to disappear. Hunting bands and tribal cultivators experience changes in complexity, either increases or decreases, just as surely as do large nations and civilizations. Collapse, involving a sudden, major loss of an established level of complexity, must be considered relative to the size and complexity of the society in which it occurs (1).

Simple societies can lose an established level of complexity just as do great empires. Sedentary horticulturalists may become mobile foragers, and lose the sociopolitical trappings of village life. A region organized under central chiefly administration may lose this hierarchical umbrella and revert to independent, feuding villages. A group of foragers may be so distressed by environmental deterioration that sharing and societal organization are largely abandoned. An argopastoral society, for one reason or the other, may cease to produce surplus to feed the nonproducers of their cities and towns. These are cases of collapse, no less so than the end of Rome, and no less significant for their respective populations. To the extent, moreover, that the collapses of simpler societies can be understood by general principles, they are no less illuminating than the fall of nations and empires. Any explanation of collapse that purports to have general potential should help us to understand the full spectrum of its manifestations, from the simplest to the most complex.

Collapse is, however, essentially a *sociopolitical* process. It may, and often does, have consequences in such areas as economics, art, and literature, but it is fundamentally a matter of the sociopolitical sphere. As Tainter points out, “A society has collapsed when it displays a rapid, significant loss of an established level of sociopolitical complexity” (1). The collapse must be rapid - taking no more than a few decades - and must entail a substantial loss of sociopolitical structure. A severe loss of material culture is often the result of such a collapse. Losses that are less severe, or take longer to occur, are to be considered cases of weakness and decline. Collapse is manifest in such things as (1):
• a lower degree of stratification and social differentiation;
• less economic and occupational specialization of individuals, groups, and territories;
• less centralized control, that is, less regulation and integration of diverse economic and political groups by elites;
• less behavioral control and regimentation;
• less investment in the epiphenomena of complexity, those elements that define the concept of 'civilization': monumental architecture, artistic and literary achievements, and the like;
• less flow of information between individuals, between political and economic groups, and between a center and its periphery;
• less sharing, trading, and redistribution of resources;
• less overall coordination and organization of individuals and groups;
• a smaller territory integrated within a single political unit.

Not all collapsing societies, to be sure, will be equally characterized by each item on this list, and the list is by no means complete. Some societies that come under this definition have not possessed all of these features. This list, however, provides a fairly concise description of what happened in most of the better known cases of civilizational collapse.

Ancient and medieval writers saw collapse in a way that is largely congruent with the perspective of the fall of specific *political* entities, the kingdom, the empire. With the formal development of the social sciences in the last two centuries, however, a new conception has emerged: the transformation

of civilizations as *cultural* forms. Many of the most prominent twentieth-century scholars, such as Spengler (47), Toynbee (48), Kroeber (49,50) Coulborn (51,52), and Gray (53) and most of those who are read by popular audiences, have written in this vein. This school sees the end of a civilization as a transformation of the features or behaviors that characterize a cultural entity. These features are typically those that form the popular notion of 'civilization': specific styles of art and public architecture, traditions of literature and music, and philosophies of life and politics. To these authors it is the end of these civilizations (that is, their transformation into polities of lesser complexity, or into some other civilization, defined as new traditions

The Indus Civilization was a complex society; at some point in time it lost this complexity. It did not get ‘transformed’ into another civilization, it reverted to its constituent components of much less complexity, of course, with concomitant and drastic changes in social, political, and economic spheres. There is, thus, no ambiguity.

in art, literature, music, and philosophy) that is of concern.

Some scholars, such as Pitirim Sorokin (54,55) are even against the concept of the 'death of civilizations'. Sorokin points out that at any point where such a death is postulated, there is nonetheless much continuity in cultural behavior from the dying civilization to the emerging one. Moreover, specific parts of cultural systems change continuously, so that the death of a civilization is difficult to pinpoint. Norman Yoffee and George Cowgill (56,57) as well as Patricia McAnany concur with this opinion. Tainter (1) is also critical of the ‘end’ pf a civilization and points out two main difficulties with this view: first, the definition of what constitutes a 'civilization' tends to be vague and intuitive, and secondly, there is an almost unavoidable element of unscientific value judgement in the very concept.

We chose to be on the popular side: civilizations are borne, they also die. Melko (58) characterizes civilizations as large, complex cultures, and is echoed in this by Flannery (59) and Coulborn (52). Such a definition will more clearly fit the present discussion. A civilization is the cultural system of a complex society. The features that

popularly define a civilized society - such as great traditions of art and writing, architecture, religion, artifacts, ornaments - are epiphenomena or covariables of social, political, and economic complexity. Social complexity calls these traditions into being. Civilization emerges with complexity, exists because of it, and disappears when complexity does. Complexity is the base of civilization, and civilization, by definition here, can disappear only when complexity vanishes. It may be true that specific polities can rise and fall within a civilization, but political complexity itself must disintegrate for civilization to disappear. For this reason the study of rising and falling complexity serves as a monitor of the phenomenon termed civilization, a monitor that is at once measurable and specifiable, and so less subject to the biases and value judgements of other approaches. The Indus Civilization was a complex society; at some point in time it lost this complexity. It did not get ‘transformed’ into another civilization, it reverted to its constituent components of much less complexity, of course, with concomitant and drastic changes in social, political, and economic spheres. There is, thus, no ambiguity.

What was it that Came to an End? Having done with generalities, let us come to the Harappan Civilization**.** Ratnagar asks the question: What was it that came to an End? (2). This is a pertinent question as it sets the tone and direction of our enquiry. First of all, it is the material culture that

largely vanished. Second, and probably more important, is the cultural homogeneity that was manifest over such a vast area went into pieces, culminating in a number of localized cultures. Third, the settlement pattern drastically changed, the population density took a nose-dive, and we see a distinct move of the people toward the east. Fourth, the internal as well as external trade came to almost at halt. Fifth, the political arrangement, probably a state or a ‘confederation’ of city states (see Section I) disintegrated into kinbased, non-differentiated social groups. All of this can be encapsulated in one basic change: the socio-political complexity came to an end.

Final Phase of the Harappan Urbanism: The final phase of the Harappan Civilization is sometimes called the Late Harappan phase. It is a murky time period, essentially a transition between the urban and the post-urban cultures, and hence difficult to define in cultural or chronological terms. Nevertheless, no overview of the Harappan material culture is possible without some reference to its final phase. This is the most poorly understood period of Harappan cultural development. It is often referred to as a period of "decline" or "degeneration".

The idea of devolution and, therefore, a Late phase of the Harappan Civilization was first expressed by N.G. Majumdar in 1928 at the site of Jhukar by identifying a pottery type which was in certain ways different from the Mature Harappan. At the same time, the cultural strata representing the Jhukar type of pottery showed occupational and cultural continuity of the earlier Mature Harappan tradition. Similar situations also prevailed at Amri, and Chanhu-daro. Mackay later pointed out that in the Late phases of Mohenjodaro the structural data were relatively poor in comparison to the preceding levels. The material culture coming out of these sites indicated the lifestyle of the people that generally reflected adverse economic conditions.

Gupta argues that the Late Harappan is the result of the breakdown of the urban fabric of the Harappan Civilization and, therefore, represents a stage of readjustment from an urban system to a rural setting “without losing its basic ethos” (7). He, however, does not say what does he mean by “basic ethos”. Chitalwala remarks that the existence of both cognate and extraneous cultural strains which are easily identifiable and have not metamorphosed into a wholly new cultural entity showing Harappan affinity even in its barest outlines could be regarded as Late Harappan (8). On similar lines, Lal has tried to define the term Late Harappan as a culture which has transformed itself from the Mature Harappan, while losing some of the latter's traits and evolving some new ones, but “still identifiable as having been derived from the latter” (9). Other archaeologists, not subscribing to the idea of the “end” of the Harappan Civilization, call all those sites who had any relation with the Indus Civilization Late Harappan.

For the sake of the present discussion, we shall stick to the original concept of Majumdar and Mackay and define the Late Harappan as the “final phase of the Harappan Civilization”, a transitory phase when the Harappan material culture was in the evident decline and was being submerged under the traits of new cultures or the degenerated Harappan ones. This definition is open to criticism; for example, at what level of Harappan material culture would a site be declared a candidate for “Late Harappan”, or, is the Cemetery H culture at Harappa a Late Harappan or post-Harappan?

While the final phase of the Harappan Civilization is not clear and still very imperfectly understood in detail, this much is clear: the historical processes impinging on Harappan life in the early second millennium were complex, varied and paced at different times in different regions. What is equally clear is that, in their interrelated totality, they had a stunning effect on the Indus peoples. What had

once been an ancient urban system, was much altered in terms of the complexity of organization. The major urban centers were no longer functioning as organized cities. If there was occupation within their bounds it is best characterized as squatters' abodes. Signs of writing, long



Pointed Base Goblets. These rather carelessly thrown goblets with scoring under the rim, were common in the Late Harappan phase of the Indus Civilization at almost all large settlements

distance trade, architecture, most craft specialization, all were in disarray or disappearing altogether. The unified system of weights and measures of the Mature Period of Harappan Civilization disappears along with the inscribed stamp seals, seemingly the property of an elite population. The large differentiated settlements, such as Harappa and Mohenjo-daro, broke down into 'squats'; where public architecture, workshops and domestic quarters were clearly demarcated; they are no longer found.

At Mohenjo-daro, Harappa, Chanhu-daro, and many other locations, the last period of occupation shows a serious decline in civic standards, with poorly constructed houses, pottery kilns in what had previously been residential areas, the neglect of civic amenities such as drains, and corpses thrown into abandoned houses or streets instead of being buried with due rites. Important public buildings such as the Great Bath went out of use. Some stone sculptures were deliberately broken. Marshall and Mackay found that Late Harappan period houses showed marked differences from the earlier ones. Those built now had entrances differently placed, with old doorways blocked. Houses in DK-G had been partitioned; this meant, for example, that a well in a large residential structure was now directly accessible to only one of the family subdivisions. Clear signs of decay are apparent in the fact that walls are now thin, perhaps no longer bearing the weight of upper storys, with odd-sized bricks laid in the most haphazard of ways.

An intriguing indicator of social change is the appearance of the scored goblet in Late levels in Mohenjo-daro and Harappa (10). These were carelessly turned on the wheel. They were not meant to be stood upright on floors or shelves when full. The deep scoring around the shoulder shows that such pots were to be tied with string in order to be carried around. Scholars have remarked on the similarity of these 'goblets' to the present-day *cullard* in northern India, but Ratnagar does not believe that their original purpose was at alI similar (2). The scored goblet is practically the only Harappan pot form to carry. Massproduced on the wheel and fired in stacks, such pots could not have been containers for individual offerings from the populace to the gods. Perhaps some measured item -

emergency grain rations for example - was handed out to the populace in these containers. Another explanation is that they were a measuring device for trading grain, as *topa* (a deep dish, made of wood) has been used for this purpose in Pothwar region till very recent times; hence their occurrence in large numbers, plus the fact that they seem to occur in a restricted size range. Although present in large numbers at cities like Harappa and Mohenjo-daro, and known at Amri, they are practically absent in peripheral areas such as Lothal and Shortughai. The excavators found that at Mohenjo-daro these goblets occurred in clusters, say near wells, rather than singly, and had suggested that they were drinking vessels; but there would have been no need to make water cups on the wheel in a standard size, much less impress them with seals. Perhaps this was a secondary use found for these vessels.

Some vestiges of the Harappan society, however, remained in view. While sea trade now hardly existed, the wide distribution of many cultural elements (such as features of ceramic form) indicates that there was still considerable interregional communication, and movements of individuals and groups both within the Indus Valley and between it and the regions to its north and the west. There seems to be an increasing amount of contacts between the Indus Valley and the area to its east - a region that was only peripheral to the Indus people so far. Although the manufacture of finely crafted square seals ceased altogether, the fabricating of crudely made round seals continued. So was the case with lapidary and bead making, and apparently the faience objects.

In the early second millennium, many cities in southern Mesopotamia declined or were abandoned, probably due to the salinization of the soil. The focus of power shifted farther north, to the Babylon region, and traders greatly reduced the scale of their operations in the Gulf, eventually turning instead to Anatolia and the Mediterranean for their raw materials. Whether the steep decline in Mesopotamian trade could have seriously affected the economy of the Indus Civilization, however, is unknown. It is a matter of intense debate. Most likely, the decrease in external trade was the result of cultural deterioration, rather than a cause.

The 'Late Harappan’ sites have a very broad distribution within the geographical area recorded for Harappan Civilization. There are five geographical zones of the late Harappan phase: Sindh; west Punjab and the Ghaggar-Hakra valley; eastern Punjab and Haryana; the GangaYamuna doab; and Kutch and Saurashtra. In Sindh, the late Harappan phase is represented by the Jhukar culture at sites such as Jhukar, Chanhudaro, and Amri. The transition from the mature to the late Harappan phase in this region does not show any sudden discontinuity. There were gradual changes in the seals, the frequency of cubical weights, and writing. The evidence of pottery suggests reciprocal contacts between the Jhukar culture of Sindh and the late Harappan culture at Lothal and Rangpur, although this interchange is hotly debated.

In the Punjab province of Pakistan and the Ghaggar-Hakra valley, the late Harappan phase is represented by the Cemetery-H culture. There is a decline in the number of settlements from 174 in the mature Harappan phase to 50 in the late Harappan phase. Harappa continued to be occupied but it was now a small village-like settlement. In east Punjab, Haryana, and north Rajasthan the number of settlement dramatically increased but these settlements were small compared to the mature Harappan ones. A number of small settlements also emerged in the Ganga-Yamuna doab. Again, these settlements were rather small, houses were generally made of wattle and daub, but the agricultural base was very diverse. In Kutch and Saurashtra, there is a marked increase in the number of settlements in the earlier part of the Late Harappan phase, from 18 in the mature Harappan phase to 120 in the early Late Harappan phase.

While there was abandonment or severe reduction in population in Punjab, Sindh and Cholistan, the increase in the number of settlements in Indian Punjab, Haryana, western Uttar Pradesh, northern Rajasthan, and Gujarat shows that this was not the case everywhere. The settlements in Saurashtra were also expanding. Overall, the data suggests an eastward and southward shift of settlements.

The evidence from mature and Late Harappan sites shows a complex interplay of elements of continuity and change. Compared to mature Harappan pottery, the slip of late Harappan pottery is less bright. The pots tend to be thicker and sturdier and rather crude. Some of the classic Harappan shapes - e.g., the beaker, goblet, perforated jar, s-shaped jar, and pyriform (pearshaped) jar - disappear. Other shapes - e.g. jars of different shapes and the dish-on-stand - continue.

Various elements of Harappan urbanism such as the cities, script, seals, specialized crafts, and long-distance trade declined in the late Harappan phase, but did not completely disappear. Some of the late Harappan sites such as Kudwala (38.1 ha) in Cholistan, Bet Dwarka in Gujarat, and Daimabad (20 ha) in the upper Godavari valley can be described, on the basis of settlement size, as ‘cities’, but they are few and far between. Also, none of these show any urban character similar to Harappa and Mohenjo-daro. Graffiti on pottery occurs in Saurashtra and northern Gujarat as well as in the eastern regions but it cannot be construed as writing. Some circular seals occur at Daimabad and Jhukar; rectangular seals minus motifs were found at Dholavira. A rectangular conch shell seal with the motif of a three-headed animal, similar to that found on seals of the Persian Gulf, was found at Bet Dwarka. This suggests that contact with the Persian Gulf continued in the late Harappan phase, at least in the Gujarat region. Bhagwanpura shows some craft activities; in Indian Punjab and Haryana, there are faience ornaments, beads of semi-precious stones, terracotta cart frames, kilns, and ‘fire altars’.

A notable development in the late Harappan phase was the diversification of agriculture. Mature Harappan agriculture had been based on the West Asian group of domesticates, which were utilized across the huge area from the Indus region to Western Europe: wheat, barley, and pulses, sheep, goat, and cattle. By the late third or very early second millennium, new crops were coming under cultivation in the Indus realms: rice and several varieties of millet were making inroads. These were better suited for cultivation in some parts of Pakistan and India than wheat and barley, and so they both changed the productivity of some of the areas already under cultivation and opened up new areas for productive agriculture. At Pirak in Baluchistan, there was the beginning of double cropping - wheat and barley continued being grown as winter crops and rice (with irrigation), millet, and sorghum as summer crops. In the Kachi plain, there were fairly large settlements, growing a variety of crops, supplemented with irrigation. Rice and millets were found at late Harappan levels at Harappa.

With these general remarks in mind, we shall now proceed with the examination of some aspects of the manifest decline in the material culture, changes in settlement pattern, abandonment, migration, and the like, mainly following the description of Ratnagar (2).

Deterioration of Material Culture: As stated above, the final stage of the Harappan Civilization witnessed a serious decline in civic standards throughout the civilizational area, including the largest cities of Mohenjo-daro and Harappa. This is primarily indicated by their architectural remains, the evidence from other sites also points to the same direction.

Marshall and Mackay appear to have discovered a discontinuity in the Mohenjo-daro sequence that was to indicate that 'the city had been reduced to ruin' between the Intermediate I and Late III phases.

What Marshall and Mackay had found was that, well below the final occupation stratum, Late period houses showed marked differences from the earlier ones. Those built now had entrances differently placed, with old doorways blocked. Houses in DK-G had been partitioned, as if families were splitting. An entrance could be narrowed down from a width of 1.2 m to less than 60 cm or 2 ft. Clear signs of decay are apparent in the fact that walls are now thin, perhaps no longer bearing the weight of upper storeys, with odd-sized bricks laid in the most haphazard of ways. The huge residential building or 'Palace' of DK-G area was, in the Late I and II phases, not only subdivided but this locality was transformed into an artisans' quarter. Meanwhile, on the citadel, the Pillared Hall of the Intermediate period, a beautifully paved structure for which five courses of baked brick, most accurately cut and set, had been used, was in the Late period partitioned by rough brick walls and utilized at least in part for *shankh* shell cutting work.

The evidence from Harappa presents a similar scenario. Here too the uppermost strata on mounds AB and F have scanty building remains, and those still extant were constructed of brickbats. Later excavations (Harappa Archaeological Research Project) distinguish a Late period (no. 3) within which the lowest stratum (no. 3A) shows unrepaired walls, non-functioning drains, and animal skeletons in the streets. This was, however, followed by a phase of rebuilding and repair. In the uppermost (no. 3C) level, scored goblets are abundantly found; there are encroachments on to the streets, and extensive brick robbing. Period 4 on mounds E and AB is identified by Meadow and Kenoyer (HARP) as transitional between the Harappan and the Cemetery H culture of period 5 when people using a totally different kind of pottery buried their dead in the old cemetery of Harappa. The architectural remains of levels 4 and 5 are scant and those that occur are structures utilizing assorted sizes of bricks.

The last occupation of Banawali in district Hissar (India), period III, which caps the Harappan, consists of three building levels totaling only half a meter of deposit, construction being in *pise*. There is a local pottery which, significantly, is found only 'in the eastern quarter, outside the walled town of the Harappans'. On the main mound this pottery occurs 'only in pits and kilns dug into the Indus deposit'. This, then, is a parallel to the intrusive nature of the Cemetery H culture at Harappa. At Balu in district Jind (in India, near the Indo-Pak borderline) there was a clear break between the Mature Harappan and later strata. Late mudbrick structures and kilns were found 'in the debris over the eroded fortification wall' of the Mature Harappan period.

In southern Sind, Amri lies in the zone where the hills of Sind Kohistan abut on to the west bank of the Indus, and Chanhu-daro 15 km east. At Chanhu-daro you do not see the enormously high walls because people did not raise new walls over standing ones in a continuous process as at Mohenjo-daro.This is probably significant. There are three Mature Harappan building levels and level II and I structures show completely different wall alignments and orientations to those beneath them. There were junctures when parts, at least, of the town were left unoccupied. For example, between II and III there is a 4-foot layer of rubbish, dust, rubble and potsherds. How long such abandonments lasted we cannot tell, but they were long enough for structures to decay. These abandonments of Chanhudaro require further thought than has been given to the history of the town, even if they may have been for short spells. Together with this comes evidence from Chanhu-daro of metal hoards or collections and numerous unfinished manufactures such as saddle querns, maceheads, and shell artifacts.

In the uppermost Harappan stratum at Chanhu-daro it appears that Harappan houses were occupied by people who used Jhukar pottery, ornamental bronze pins, a socketed axe, and a bronze cosmetic jar,

all of which are probably alien to the Harappan repertoire. This occupation was succeeded, on Mound II, after a sterile layer, by the Jhukar culture layer in which houses were made of Harappan bricks, often one-roomed and with characteristic brick-on-edge fire-places, and large numbers of bone awls for mat making. The Jhukar occupation is limited in extent: on Mound I, for example, Mackay found very few Jhukar sherds and these could have been left there by casual visitors.

Mughal and Dales were convinced that the Jhukar is only a late developed ceramic tradition and not the sign of a new culture in Sind, leave alone the remains of intrusive Aryans (10,13,14). Mughal argued that at the site of Jhukar, 27 km north-west of Mohenjo-daro, Mature Harappan pottery was present in all three phases and was associated with Jhukar pottery, which means that it was only an evolving ceramic tradition. Possehl, too, (4) stressed the absence of stratigraphic breaks between the Harappan and Jhukar pottery strata at the sites in Sind. Yet the evidence at Chanhu-daro of other artifacts like bone awls, fireplaces, head rests and seals, and a totally different style of habitation have perhaps not been sufficiently appreciated. The fact that Mackay found it difficult to isolate Jhukar material from Harappan was because standing Harappan structures were occupied, disturbed, and modified - not because one culture grew, little by little, out of the other (2).

In 1979 Casal elaborated on the sequence at his site, Amri, with an interesting perspective on the history of the two neighboring settlements of southern Sind. At Amri there were five strata with Harappan material, with a few changes in pottery from one to the next. In the uppermost (level III C) of these strata, occurred the pointed-base scored goblet together with Jhukar sherds, probably brought by intruders, Casal said (15). But this stratum, III C, was the only Mature Harappan level with baked brick construction in the Harappan mode, with cubical weights, writing, and an uninscribed seal. It has ceramic parallels with Late Mohenjo-daro. Casal therefore believed that Amri was a poor and insignificant settlement to which people of the richer Chanhu-daro had fled; that there had been quick abandonment of Chanhu-daro due to raids, but that hill raiders squatted at Chanhu-daro before moving on to Amri where they mixed with the local people and then went on to Mohenjo-daro and Jhukar. Casal associated Jhukar pottery with raiders from Baluchistan because, according to him, this ceramic also occurs at sites like Periano Ghundai; but there is also a similarity between Jhukar pottery and that of pre-Harappan Amri even though Casal saw it as a mixture of Indus and Baluchi elements. (It needs to be pointed out that there is no Jhukar building/ occupation stratum as such at Amri IIID; the only manifestation is a large quantity of Jhukar pottery and the odd seal, all in much disturbed contexts. This is an attractive hypothesis although it remains for us to confirm the relative chronology of the two settlements, and although Amri would be a more logical first halt than Chanhu-daro for raiders from the Kohistan. At Amri, too, we have seen that the 'hill raiders' apparently did not construct many durable structures
- in fact much Jhukar Period construction must have been damaged when the Islamic fort was constructed on the mound - but the quantity of Jhukar pottery in level III D sustains the argument against a picnic or week-end camp of casual visitors.

The evidence in Kutch is not as extensive, but is telling in its own way. There appear to have been disastrous events at Surkotada in the late period of occupation. Between IB and IC levels, IC being the last, there is a thick though uneven layer (30 cm thick on the citadel mound, 70 cm in the residential area) of ash, the sign of 'a huge conflagration' (11) in all parts of the site. Perhaps this was not a natural fire, for during the next period, IC, the citadel defenses were made truly secure. The gateway complex was rebuilt as a strongly guarded and restricted entrance system. Incidentally, IC was a shallow stratum less than a meter in depth whereas IA was in places 4.4 m thick.There are about half a

dozen minor jewelry caches in IC, four of them in buried pots. Some new kinds of painted pottery appears. As for Dholavira, the magnificent site on Khadir Island in the Rann of Kutch (12), the last three strata, V to VII, represent a general decline, punctuated by a short desertion of part, at least, of the settlement.These levels see new ceramics, a shrinking of the inhabited area, jerry-built structures, and, finally in stage VII, before abandonment, round one-room houses - this is the most rudimentary of house forms.

Abandonment of Settlement: The decay and demise of the Harappan Civilization is evident from a visible change settlement pattern. First, numerous Harappan settlements in the core areas of the Greater Indus Valley (Sind, Punjab and the Cholistan Desert) are abandoned. For example, from Mughal's survey in the Hakra Valley, it appears that out of 83 Harappan habitation sites, only one continued to be occupied and 27 new settlements were established. At the same time, there wasthere was 63) settlements in the Himalyan foothills. Large cities were abandoned or shrank to negligibly small occupations. At the five largest settlements, Mohenjo-daro, Harappa, Ganweriwala, Dholavira, and Rakhi Garhi, there are no vestiges of postHarappan occupation (2).

Village or town abandonment is not in itself particularly mysterious. It has occurred often in history, because of repeated droughts in a region, or village epidemics, destruction of houses by flood, the wearing out of soil fertility, or the promise of better land elsewhere. In our case it is the scale of desertion and its permanence (not desertions for a few years until recovery) that are significant.

During the life span of a town or village some of its houses may be emptied of occupants, even as life in the settlement continues; it can happen that people move out of a settlement in stages, over decades; or else an abandonment can occur all at once. The problem is that archaeologists have few devices to distinguish one mode of moving out from another. We only have some clues to go by, no hard-and-fast criteria, no 'laws of the archaeological record of abandonment'. The same difficulty arises with the circumstances of site abandonment. As W. Adams (16) has pointed out, in house repair there is no gentle way of removing a wall - it has literally to be knocked down. And an excavator may mistake this for an act of violence.

When evacuating a village or town, people will, if they have the time, salvage roof logs, grinding stones, portable pottery, food grain, and other useful items, to carry away (17). Some rooms or houses will have lain unused for a while, piled with discarded things, before departure, or, as at Altyn-depe, be used as burial place. People may pull out house posts, and sometimes postholes contain telltale pebbles or sherds which show that the wood of the posts did not decay *in situ* (18). Very few items of utility or cultural value will be left behind. For example, we will not find grain in the storage jars or silos, or uncast metal ingots on the floor of the workshop, or icons at the hearth. A good example is the Akkad period palace at Tell Brak in Syria, which was a storehouse and administrative center with a large ceremonial unit and a temple. It was abandoned after about 2200 BC. Its contents were removed, and then offerings were placed within, followed by a ritual filling in of the rooms (2).

In contrast, hurried departures during times of violence may be indicated by (2):
(a) burnt buildings with their fixtures and appointments during use still in place, though charred or broken. Items that were to be baked may remain stacked near a kiln that was never fired, as at Ugarit (19). The tip of a spearhead may be found embedded in a piece of wood (Shahr-i Sokhta). A child's charred skeleton may be found clutching some object and lying under fallen rooflogs (Shahr-i

Sokhta).

(b) jars set in floors can be seen to have broken there, so that they can be reconstructed from their pieces. The sherds on the floor of a hurriedly abandoned room will tend to give the parts of entire pots that were in use in that structure,

(c) walls with signs of recent repair or plaster,

(d) craft items left half finished at the place of manufacture as at Ugarit (19),
(e) valuables or culturally significant items, of no use to the destroyers or to subsequent squatters, used in ways never intended. After destroying Ugarit its pillagers used some clay tablets inscribed with religious texts to support shanty walls. At Dholaviraa vandalized stone statue came to support a wall.
(f) valuables or culturally significant items like religious emblems or statuary or rulers' inscriptions smashed or defaced,
(g) the dead hurriedly buried in non-customary spots or ways,
(h) safely or secretly deposited wealth items left behind in the rush to flee the enemy. That these were secreted wealth and not votive offerings or ritual building foundation placements will be indicated by disturbed floor paving. Adams (16) points out that evidence of burning is not by itself proof of attack or invasion. Residents may burn down houses because of vermin or disease. But in a kind of classic instance of attack, at Tepe Hissar in north-eastern Iran (a settlement which will be of relevance to our argument) we find several signs, such as burned and charred walls, recently renewed plaster, charred roofing material, a post-hole with charred wood remains, a number of flint arrowheads in the vicinity of the building, metal weapons, and crushed skeletal remains. There were also spills of charred wheat and a storage room with fifteen large pots crushed by roof collapse. This burned building at Hissar presents an archaeological situation in total contrast to the evacuated palace at Tell Brak. Most situations, however, fall somewhere between these extremes.
Quick abandonments, but without violence or destruction, may be indicated by: (2)
(a) grain remaining in storage jars or silos (b) charcoal remaining in fireplaces,
(c) half-finished craft work, associated tools and raw materials remaining in "'workshop” areas,
(d) the pottery (broken or intact) recovered in individual households representing the entire range required for domestic use,
(e) clean-swept house floors and courtyards,
(f) the figurine or emblem of a family deity in its place in the home,
(g) thick (say 30 cm) layers of roof collapse on disused floors showing that roofs were not salvaged and subsequently fell in,
(h) buried wealth left unretrieved,
(i) usable items left behind, these being obviously not part of the day-to-day refuse of a family. With these clues in mind, Ratnagar takes up the Harappan evidence.

Mohenjo-daro: We begin with Mohenjodaro, probably the nerve center of the civilization, judging from its size, architecture, exotic materials, and range of artifacts. As is almost invariably the case, the uppermost strata of a mound, in which we would seek clues for the nature of the abandonment, are the worst preserved. The remains of buildings that have been abandoned and exposed to the elements for centuries crumble into incomprehensible patterns. It can also happen that, over the centuries, following the death of

a city, people of the surrounding region come in to take away bricks or stones for use elsewhere. In Pakistan we have long dry months which mean exposure to the sun and wind, followed by rainy months when crumbled particles get washed away. Year after year the finer particles of soil can get swept away by wind and heavier material, such as broken bricks and pottery pieces, settle to form a kind of cap over the top of the mound. Rain, in its turn, can wash away floors or artifacts and re-deposit material at the bases of slopes, often in reverse order of their original vertical sequence.

Mention has been made above of the evidence for the dismantling of structures in the general process of settlement evacuation. House V in HR-B, Block 2, provides some interesting pointers (2). (As we shall see, 14 skeletons were found in this Late period house.). It has a large courtyard, no. 70, with 5 short walls of decreasing length perpendicular to a rear wall. In room 49 were found, together with two limestone pillar capitals, a dump of eighteen large alabaster rings, each about 25 cm high, and polished smooth. They had internal cavities in their centers, of about 11 to 23 cm in diameter, and thus could have supported wooden posts. They appear, therefore, to have been some kind of architectural element. (This kind of artifact occurs only in the large cities, Harappa, Mohenjo-daro and Dholavira). But obviously room 49 was not the place where any such columns had originally stood. The heavy rings could have been gathered here with the intention of re-use elsewhere, or else for carrying away - which never happened.

There are other things, too, which were never retrieved. An example is the caches of metal and jewelry found in the Late levels of Mohenjo-daro, hidden under house floors. Rissman (20) found that they contained artifacts of a different range than did Harappan graves. He contrasts their secret nature with the social or public act of burying particular objects with the dead. In our context, however, the house caches are significant because they speak of insecurity. In large numbers such hoards indicate times of uncertainty, political instability, and fear of internal clashes or raids on a settlement. For example, when, during the early eighteenth century the Mughal empire began to decline and its systems of communication, tax collection and security began to break down, with the westerly maritime trade reaching a glut, and Maratha attacks on Gujarat had begun, the commercial life of Surat collapsed. An Englishman, writing in 1701, commented: 'The town being bare of silver is occasioned by peoples fears of the aged and infirm Emperor's [Aurangzeb's] death; they abscond and bury what they have to avoid the ravages they dread .. .' [Das Gupta 1994, quoted in Ratnagar (2)]. Similar examples are found in 1947, when the departing Muslims in East Punjab and the Hindus and Sikhs in West Punjab buried their jewelry in the ground, hoping to retrieve it when things are somewhat settled down - of course, it did not happen.

Of the five largest hoards of valuables in Mohenjo-daro, four belong to the Late levels (20). They are rich collections of bronze and silver containers and personal ornaments of gold, silver, bronze and various semi-precious stones. Three smaller caches were found (containing bronze bangles, chisels, figurines and various tools and vessels) in a fairly restricted area of DK-G North, in Blocks 14 and 15. One of the richest hoards lay in a small building in the DK-E area and is remarkable for its exceptionally long carnelian beads (each, about 12 cm long) strung with Dshaped terminals of bronze, small round bronze beads and six-holed bronze spacers; gold ear studs with granulated decoration around the edge; and two large gold needles (up to 6 cm long) with eyes in their pointed ends - for either tapestry work or wearing in the hair. Many more pieces of silver and gold jewelry

occurred in this treasure.
Near the western flight of steps in courtyard 10 occurred a headless statue (HR 163) of alabaster; part of the head was subsequently found in South Lane; and four days later the remainder of the statue showed up in courtyard 34 in another building to the north. The extant height of this reconstructed portrait of a seated male is about 42 cm. Stone statuary is rare at Harappan sites. When it occurs, it portrays either men or pedestalled figures of animals, but never women. The style is always formal and formulaic; about a dozen such pieces occur in Mohenjo-daro, one at Dholavira, and none elsewhere. Most, if not all, the statues were desecrated (broken) in antiquity. In fact another head (HR 910), in limestone and with the hair and features exceptionally schematically rendered, lay in room 14 of the HR-A house I, but there is no stratigraphic connexion between the two.
Ratnagar thinks that these are portraits of a royal lineage, because of their material, rarity, and formal or monumental style. We have as yet found no temples that would indicate that idols of deities were made. There could have been a rebellion or a major dynastic upheaval, during which the royal portraits were viciously demolished. (Consider also the 'Priest King' and the damage to its torso, face and arms). The head dress, falling in two strands down the back of the head, is like that of the reconstructed seated statue from HR-A found in House I. The 'Priest King' statue had fallen, together with a wall, into a narrow passage in a shoddily built, Late period, quarter of the DKB area.
Even those who doubt that these stone sculptures carry political significance would at least concede a religious or symbolic significance to the four stone figures of seated animals from different parts of Mohenjo-daro, and the fact that these, too, were vandalized in antiquity and none was found in its original context. A couple of these were monolithic, the animal carved one with the rectangular pedestal below. The use of stone, the 10-cm high pedestals, the extant height (about 25 cm), the bent left hindleg hidden beneath the haunches, and the weird ridged 'trunk' of one of the animals point to a ritual or highly symbolic context (21).
The impression we gain of intense enmity and hatred abroad becomes relevant when we consider the controversial skeletons left behind in Mohenjo-daro. No cemetery has been found at this site, such as at Harappa, Surkotada, Kalibangan or Lothal, but it is reasonable to assert that in the Harappan region a regular mode of disposal of the dead was burial in cemeteries, or sometimes fractional burial of cremated remains under house floors. Intramural burial in the habitation area is, in the Harappan context, a freak occurrence and practically confined to Mohenjo-daro, with one exception at Harappa. At school we were brought up on the skeletons in the Mohenjo-daro streets, under house floors, and in well rooms. For Wheeler they became evidence of the invasion *[sic]* of the Aryans. In 1961 Dales had, however, sounded a caution. Dales argued that such skeletons were too few in number to amount to what Wheeler had called a massacre by the Aryans. There were no burials in the citadel, Dales pointed out, where we would expect the last defense of the city to have been conducted. And the skeletons do not all date to the same stratum or phase in the life of the city. Kennedy (22), in his inimitable style, reported that two of the skulls did carry marks of injury, but that 'the recipients of thumps on the head had survived this outrage by several months'. One cannot argue with this, but Ratnagar urges that ‘we do not throw out the political significance of these skeletons just because the Aryan connexion is dubious. The fact that they do not amount to a massacre does not rule out conflict, strife, or raids on the city in the last days of its occupation” (2). Let us survey the evidence.
In the famous Deadman Lane in HR-A, Block I, which is a narrow lane about 1.5 m across, and turns west into First Street, a major thoroughfare, lay the partial remains of an adult male. In the VS area, house XVIII appears to have been a building of some importance, yielding some finely painted pottery and a few seals, plus three talismanic copper tablets. In the wide lane 4, west of this structure, were found six skeletons in various postures, one being that of a child. Over the legs of one and the torso of an other lay the partial skeleton of an unidentified animal, the juxtaposition probably

fortuitous. The excavators inferred that the skeletons had been interred here after the house had ceased to be occupied; this was not a regular burial, but one that followed a sudden raid or severe epidemic (23). Amongst these is also the case of the 'well room tragedy'.

In an unusually well constructed and probably not ordinary house (DK-G South, Block 8 A) dating to the very last occupation of Mohenjo-daro (24), is a well room. On the steps lay two skeletons, one of them of a young woman, found where they had died. The skull of the other lies between its legs, as if the man had fallen over backwards and died. In Low Lane also there are two skulls - the rest of the remains presumably devoured by animals. Mackay was convinced that the four were murdered and that this event had occurred during the terminal occupation of Mohenjo-daro (rather than after it had been deserted): the well room, he said, was 'in actual use when the tragedy took place' (24).

Then there is a group of nine skeletons in another spot (DK-G South, Block 10 A), all in 'strangely contorted attitudes and crowded together'. One girl child wears an ivory comb in her hair and a thick copper bangle. In all there are five children, one 12-14 year old possibly decapitated (24), three men, and possibly one woman. The bones being all present, it was inferred that the bodies had been hurriedly buried after the deaths. The skeletons lie on ruined masonry of the Intermediate III period, probably a spot unoccupied since the commencement of the Late period. Two elephant tusks were also buried there, one of these a magnificent piece more than a meter long. Mackay, therefore, thought that this was the death of a family who 'tried to escape from the city with their belongings at the time of a raid' but were killed near the city periphery. Possibly they were ivory carvers, and their enemies who killed them either did not value ivory or did not know how to carve it.

In HR-B area (Block 2) house V, again a prosperous establishment, in a small room, no. 74, occurred fourteen skeletons, one with a girdle of 75 faience beads, two with shell bangles, one person wearing three bronze bangles, and so on. They were rich people. The bones of the different individuals were found jumbled together and according to Marshall this mass death occurred in the Late period, a period from when structures have not survived, so that the top of the pit dug for the burial is also missing. House V was not occupied when the burial was made. Hargreaves, who excavated this locality, however, believed that the fourteen skeletons are 'posterior to the abandonment of the latest city'. In a deep sounding at the western edge of the HR residential area in the south of the city, Dales came on five skeletons of the latest phase of occupation (10).They lay in a stratum of debris, broken brick and silt, nowhere near a floor or street surface. Actually, the bones lay on top of sherds of the 'Jhukar' type. This is a late pottery, believed by some to be post-Harappan in date. Dales concluded that the burial dated to a time after the major abandonment of Mohenjo-daro, a short terminal spell when the few remaining inhabitants were using Jhukar type pottery.

To recapitulate, these burials are significant because they do not follow the prevalent modes of disposal of the dead; most were intramural burials - in one instance bodies actually lay unburied on stairs - although the latest houses below which they were deposited have not survived in every case. There are no grave goods for the afterlife with these bodies; as stated, the kinds of ornaments occurring with them are not the sort routinely found in Harappan graves; these people appear to have been buried in whatever they were wearing at the time of death. It is also significant that one person was decapitated and that among these group burials, children occur (2). *Harappa:* In Late levels on mound F, Vats found a cache of bronze tools and unfinished bronze artifacts. A very rich hoard of jewelry has also been found buried under the floor of one of the so-called 'workmen's quarters', perhaps dug in from a higher stratum. A figure-of-eight shaped silver plate brooch which has 3 gold strips soldered on it, bent into the appropriate shape, is included in this treasure. Rows of miniature steatite beads, capped with gold, fill the spaces. There were also a large number of gold beads and a conical cap and carnelian beads in this hoard. On the edge of mound F was found a mass of ash with partly burned human bones, as well as a quantity of stone mortars and pestles.

Few scholars give importance to a find in area G of Harappa. Here the uppermost stratum produced the usual Harappan material. A pit dug about 1.5 m below the surface contained 20 skulls and 10 mandibles, miscellaneous human bones, 11 scored goblets, other pottery, and a headless skeleton. The skeletal remains represent 6 children, 9 men, and 4 women among others. Vats suggested that this burial followed a massacre, accident, or epidemic. The last appears improbable as the skeletons are incomplete and the skulls disproportionately many. The pottery in the pit (and there are no personal ornaments) indicates that some kind of ritual was followed in the burial. Interestingly, the material found in area G could represent a phase intermediate between the Harappan and Cemetery H periods (25). The cities on the Indus were abandoned not because that river was drying up - though it is prone to devastating floods and changes of course - but because the society of which they were the foci changed its distribution and density and thus broke with tradition. Material production in the relocated villages could continue essentially as before, but overall social reproduction was profoundly affected and would need new structures. Of course, re-adaptation could be effected only on the basis of what went before.

Eastward Migration: While discussing town and village desertions, we had ruled out population extinctions. In this context, the important factor is that desertions of settlements can be due to the migration rather than the death of the inhabitants concerned. Let us now think about group migrations at the end of the Harappan period. Here again, we follow Ratnagar (2).

Harappan sites that have survived best are those along the Hakra system in Pakistan, identified by some as the lowest reaches of the Ghaggar-Hakra river system. Because the Ghaggar-Hakra system became practically defunct some time in the second millennium BC, the deserted mounds along its lowest stretch were not subjected to repeated river floods or erosion. The field surveys by Mughal located 174 Harappan villages, towns, camps, and brick- or potteryfiring sites, among them 83 habitation sites (villages as well as towns). In the succeeding Cemetery H period there were 50 sites north and northeast of the medieval Derawar Fort, 28 of them habitation sites with or without kilns or manufactures. While in the Mature Harappan period 9 or 10 sites (6 per cent) were camps, presumably of animal herders, in the subsequent period 13 sites (26 per cent of the total) represent camps. The largest site of the Harappan period (Ganweriwala Ther) in this tract was about 41 hectares; in the next period the largest site in this subregion, Kudwala, was 38 hectares. From Mughal's raw data (26) it can be calculated that the total settled area in this tract fell from well over 450 ha in the Harappan period to 233 ha which was less than half the previous settled area. Thus while Mughal (13) sees continuity, for example in the four-tier settlement hierarchy of the region, Ratnagar places more emphasis on discontinuity. Also, 38 ha for the largest Cemetery H site may not be much less than the 41-ha size of Harappan Ganweriwala, but it is by no means comparable to the sizes of Harappa and Mohenjo-daro (125 ha each, if not more).

All in all, in this region the settled population declined and it is likely that the proportion of mobile pastoralists rose, but further upstream, in the Divide, the number of villages increased after the Harappan period. Suraj Bhan's surveys (27) revealed that there were 86 Mitathal II B sites in the upper Divide, which contrasts with about 58 ‘Mature Harappan’ and local Siswal culture settlements of the earlier period (28). If we follow Shaffer's figures (29), perhaps the most reliable, we have an increase from 43 Siswal A-B and Harappan sites to 127 Siswal C-D sites. The later Siswal culture at Mitathal II B saw the merging of the two ceramic traditions. Local technological traditions included storage in pits of depth between 1 and 2 m lined with chaff-tempered clay; faience and terracotta bangles; and thin-walled mud or mud brick houses.

Site counts in different regions for the Harappan and sub-sequent periods give strong grounds to Ratnagar (2) for arguing that communities moved and relocated, usually to villages that were smaller than before. Such a phenomenon is not unique to the Harappan period or to the Indus region. In the

ancient world, during military attacks or political crises or agricultural calamities, village communities dispersed, especially when states were unable to prevent it, and took to hunting-gathering, or sheep-and-goat herding, or small-scale subsistence agriculture elsewhere (30). There would have been an accompanying change in the structure of labor, as families were thrown back on their own resources. Moreover, relocated groups, being initially small, leave scant archaeological trace, as has been observed by Sandars (31) in the context of the collapse of the Bronze Age of western Asia and the eastern Mediterranean. Hence we can expect a large proportion of a dispersed population to remain, initially at least, invisible in the site record (2). In the Harappan case a major reason for migration up the Indo-Gangetic Divide could have been the progressive drying up of the Hakra and its upper section known as the Ghaggar system in India; as Misra (32) has argued so convincingly, small streams from the Sivaliks which fed this system were captured by the Sutlej in some cases and by the Jumna in others. Mughal (33) claims that the tract occupied by Cemetery H sites in Cholistan, stretching between Fort Drawer and Yazman, was fed by a south-flowing offshoot of the Sutlej, joining the Hakra near Yazman. It is important to note that in the Mughal period the combined Jhelum, Chenab and Ravi rivers joined the Indus at Uchh while the combined Beas and Sutlej fed the Indus further downstream (34).

The post-Urban Period

Late Harappan ca. 1900 - 1700 BC Post-Harappan ca. 1700 - 1200 BC Painted Grey Ware ca. 1200 - 800 BC Early Historic Period ca. 600 BC Onward

In the next (Painted Grey Ware using) period sites were located within the druied bed of Hakra. If, indeed, the Hakra-Ghaggar is the Sarasvati of the *Rgveda - and* this is by no means proven - we need to note that it is described in that text (dated between 1500 and 1000 BC) as a major river; this would mean that the river was not totally and finally dry towards the end of the Harappan period, or the RigVeda is referring to another river as Sarawati, as Kochar (35) and many other scholars have indicated.

Ratnagar (2) wants to emphasize that hydrological factors may have prompted migrations, but this does not mean that they were a 'cause' of the collapse. We distinguish 'cause' from 'enabling factor' and from 'trigger' or 'precipitating factor', and these in turn from 'symptom'. Large-scale migrations, it would be reasonable to assert in the current state of knowledge, were probably a symptom of the collapse of social institutions or a result of depletion of vital resources (see the next chapter).

Trade: Was the secession of long distance trade one of the causes of the fall of the Indus Civilization or was it a symptom of its decay and decline? Shereen Ratnagar (2) and some other scholars tend to believe that trade played a decisive role in the fall of the Indus Civilization while many more view the decreased or entirely elimination of external trade was just a symptom of the decay that was befalling on the Indus as well as the Mesopotamian civilizations. In these opinions the external trade was not of such importance that its termination could cause the Harappan economy to collapse and undermine the position of the elite. They believe that the trade was sporadic (36,37) and was not that extensive. Despite some tenable arguments of Ratnagar and others in favor of trade as a cause or enabling factor in the demise of the Harappan Civilization, we would put our weight in favor of the decreased trade as a symptom of the decay, not a cause.

Chronology: The chronology of the decay and demise of the Harappan Civilization is pretty much in

dispute, as is its beginnings. Many aspects of the problem are related to the almost casual definition of the “Harappan”, sometimes innocently but oftentimes deliberately, by some archaeologists, such as Lal, Rao, Joshi, Dishkit, and their students, who have excavated in Gujarat and the Divide. Some western archaeologists, particularly Possehl, Kenoyer, Meadow, and before them, Dales, are also casual in their approach and have unwittingly followed the Iead of the indigenous scholars of India. Obviously, as long as the criteria of the Harappan Civilization is not fixed and consistently adhered to, there is no hope that the date on the tail end of the Harappan Civilization could be fixed in any meaningful manner.

Another difficulty in the chronology of the Harappan Civilization is that many elements of this civilization can be found in later cultures. Some archaeological data suggest that material culture classified as Late Harappan may have persisted until at least *ca.* 1000-1300 BC and was partially contemporaneous with the Painted Grey Ware culture. Recent work at Harappa has clearly demonstrated that during its late phase, from 1900 to 1300 B.C., Harappa was indeed inhabited. Now, at what point in time, the Harappan culture ceased to exist and what are the criteria for determining this point? Some archaeologists have emphasized that, just as in many areas of the world, there was a continuous series of cultural change, without any cultural break. If that is so, then the whole idea of chronology goes out of the window.

In spite of the above misgivings, the fact remains that a large number of settlements in the core area were abandoned within a short time, roughly around 1800 BC, and around this period the Harappan Civilization as an urban society came to a virtual end. This date is supported by the fact that the Mesopotamian literature stops referring to Meluhha by the end of 1900 B.C. The site of Harappa indeed continued to be inhabited but it shrank from a large city to one of a small, insignificant village. Signs that drain and city walls were not maintained provide proof of a breakdown of civic order. The Harappan remains also suggest that the ruling elites were no longer able to control the day-to-day functioning of this former urban center. Houses made of old dilapidated bricks and shoddy construction encroached upon the roads and streets of the towns. Flimsy partitions sub-divided the courtyards of the houses. The cities were fast turning into slums.This loss of

Harappan and post-Harappan Settlement of the Hakra Plain

	Harappan Period	*Post-Harappan Period*
Total number of sites	174	50
Habitation sites	83	28
Camps	9	13
Largest site (ha)	41	38
Total settled area (ha)	450	233
Mean size (hectares)	5.5	8.3

authority must have eventually led to reorganization of society, not just in Harappa but throughout the entire region that the upper classes had dominated for 700 years.

A detailed study of the architecture of Mohenjo-daro shows that many entry points to the 'Great Bath' were blocked. Sometimes later the 'Great Bath' and the 'Granary' fell into total disuse. At the same

time the late levels (i.e. later habitations) at Mohenjo-daro showed a distinct reduction in the number of sculptures, figurines, beads, bangles and inlay works. Towards the end, the city of Mohenjo-daro shrank to a small settlement of three hectares from the original eighty-five hectares. If we take these criteria to designate the end of an urban culture, then we should not have any qualms to fix an approximate date of the "end" of the Harappan Civilization as 1700-1800 BC.

However, even now, the chronology of the demise of Harappan cities remains tentative. We



A Sindhi oxcart - note the small and solid wheels, just like those depicted in Monhenjo-daro's toycarts

do not as yet know whether the major settlements were abandoned at one and the same or at different periods. What is certain, however, is that the abandonment of the major did occur in rapid succession and that it surely indicates the demise of the Harappan Civilization. This period of decline and fall may have been different from region to region, spanning from ca. 1900 BC to *ca*. 1700 BC.

Post-Urban Phase: Equally instructive for the understanding of the end of the Indus Civilization is the post-Harappan period, that is, the time period from the decline of the Harappan urbanism to the growth of the so-called Vedic culture. It is the most poorly understood period of Pakistan's early cultural history. Possehl calls this period 'Post-urban' and has proposed to divide it into three sub-divisions, Early, Middle and Late. The Early Post-urban period, dated from *ca*. *ca*. 1700 BC, is equivalent to the Later Harappan period described above, covering a time when the Harappan Civilizations was either still flourishing in some parts, or at any rate was still very much present in people's memories. The Middle period, dated from *ca*. 1700-1300 BC, represents a time of greater regionalization of cultures and the growing emergence of a distinctly post-Harappan style. Finally, the Late Post-urban period dated from *ca*. 1300-1000 BC, witnessed an increasing pace of

development towards new cultural groupings. Another way

to describe the post-Urban period is as depicted in the table below.
The very term 'Post-Urban' phase indicates that it marks the etrmination of an Urban phase and implying the collapse of a flourishing civilization. It also suggests that the preceding

Urban/Mature phase was more in line with the concept of civilization while the Post-Urban phase was a poor reminder of this glorious past. This is obviously an outcome of the normal process of cultural degradation due to a general economic decline that brought in changes in the internal interaction of the society.

Post-Harappan period witnessed a further decline in the civic standards, a process that had already started in the Late-Harappan phase. In fact, this cultural period represents the reversal of all the abstract criteria of urbanization as laid down by Childe (38) and discussed by Adams (39). Ghosh has identified this period with those which are later than the Mature Harappan but still have some affinities with it in a degenerated form. Dales observed that with the decline of the Harappan Civilization, the sophisticated Harappan traits were watered down to a large extent by mingling with the impoverished local cultures, until what was once distinctively Harappan was diluted to the point of non-existence (40).

The original excavators, such as Marshall and Mackay, visualized the Indus Civilization as having come to an ‘end’ after the disintegration of major Indus cities in the early second millennium BC; the post-Harappan cultures, therefore, having no or little continuity with the material culture of the civilization before them. Several later scholars also saw a clear cultural break between the Harappan Civilization and the post-Harappan cultures that followed. Among these scholars is Ratnagar, who has forcefully advocated a clear break between the Harappan Cultural Tradition and the subsequent post-Harappan cultures. Ratnagar argues that, in spite of dismissing demographic collapse, the civilization did indeed come to an end: “Certainly some pottery forms, oral traditions, village cults, and the rural sciences of land use entailing knowledge of seed types, animal behavior, and climatic conditions, did not go into oblivion. But however many such elements we count as 'survivals', they are not tantamount to an integrated Bronze Age political economy” (2). Also, “a stray Harappan sherd does not make it (the site) Harappan”.

This post-Harappan period does not represent a unified or culturally integrated culture; instead, it represents a collection of diverse cultures with some ill-defined geographical boundaries but more-or-less confined within the same geographical areas where the pre-Urban cultures of the Early Harappan genre thrived prior to the mid third millennium BC. These 'chalcolithic'; smallscale, usually with small, one- or two-room cottages, very few crafts, a simple stone tool technology supplemented by a few forms of bone tools, and not many types of copper/bronze artifacts, often ornaments rather than tools, were represented by Sawat Graves Culture in the Pahtun country, Cemetery H culture in northern Punjab, Juhukar culture in western Sindh. Similar lowlevel cultural groups emerged in Gujarat, in Helmand Valley in Afghanistan, in Makran, and ,of course, in the Divide. There were no great storage structures, or distinctive sculptural styles, no fortifications in the true sense, not even communal wells.

At the same time, these post-urban cultures exhibited tremendous subsistence diversity in terms of eco-niches utilized, kinds of crops grown, wild foods eaten, animals domesticated, and so on. Crafts with large turnovers and steady output (pottery, for example) saw continuous development. But not

seal carving or inlaid ivory work or gold ornaments: such crafts would have been dependent on elite demand and state organization of imports of stones and metals. Besides, such crafts required the conscious cultivation of specific skills. Bronze Age economies and technologies, it appears, carried inbuilt structural Thus the Harappan legacy is not its city life, but rural technologies or peasant science, knowledge that was within the control and experience of the ordinary household or village- elements of culture that had been internalized and passed down generations within the family and the community.

Indus Heritage: We have seen the manifest decline of the Harappan material culture in the first few centuries of the second millennium BC throughout the core area of the Indus Civilization as well as in its peripheries in the east and in the west. Still, this collapse of the Harappan Civilization did not lead to the total eclipse of all the traits of this civilization and many of its features were observed in the later cultural developments in Pakistan as well as in the adjoining areas of India. This aspect of the Indus Civilization is sometimes exaggerated to a point of absurdity but the fact remains that a faint shadow of the Indus Civilization is no doubt observable in the post-Harappan cultures, even to the present time. For one, agricultural techniques, and the practices of rearing domestic animals, survived. For another, it is likely that the Harappan peasants would have retained their religious beliefs - the power of the mantras, the efficacy of the amulets, the antics of the shamans, even the system of social stratification on the basis of caste.The priests and shamans of the Harappan urban centers were part of a highly organized tradition and their traditions could have been transmitted to the postHarappan cultures where it could have been transformed into the Hindu Brahmanical order. This is, however, not to say that the classical Hinduism originated in the Harappan culture and flourished in the post-Harappan landscape.

Mohenjodaro, Harappa, Chanhu-daro, Kalibangan, and other contemporaneous cities of the Indus Valley withered away for a variety of reasons. But what does their end mean in relation to the character of the cultural developments that followed? At the outset, there are two issues in the debate around this question that seem to be worth identifying. The first concerns the general characteristics of the successor cultures and whether they mark a departure or a devolution from the Mature Harappan tradition. The second relates to whether the Harappan heritage, in any form, contributed to the cultural continuum that followed the demise of its urban form.

These are issues that have attracted comment from the time that John Marshall, in his first All the scanty data at present available taken into consideration, the possibility of Harappan urbanism surviving or resuscitating in the upper Ganga

basin through the Late Harappan and ochrecolored ware sites in the middle of the first millennium BC may as well be rejected. volume of the Mohenjodaro report, unhesitatingly drew a connection between the Harappan past and contemporary India, when he described the religion of the Indus people as being hardly distinguishable from that aspect of living Hinduism which is bound up with the Siva and Mother Goddess cults (see Section II). Like Marshall, Stuart Piggott believed that the civilization left behind an enduring and broad-based legacy. He argued that it was not merely in the religious sphere - where the growth in power of the Brahmins over the Kshatriyas was seen as a blending of the ‘martial *Rgvedic* tradition’ and the ‘priest-ruled Harappan civilization’ - but in the political sphere as well that the Harappan example endured. More specifically for Piggott, Chandragupta Maurya's state system contained within it many elements that were an integral part of the Indus civic tradition. These leads have been taken up by some Indian historians who have linked

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Civilization to everything from the weight system of early historic India to the sacred conch shell used as a trumpet in the *Mahabharata*. These chauvinistic tendencies, encouraged by the state as well as the academia, have greatly corrupted the archaeological history of India as well as of Pakistan.

Right from the days of the discovery of the Indus Civilization there has been speculation on the extent to which that civilization influenced the Hindu culture materially and spiritually, and it is not surprising that theories have not stopped pouring in even now, often reinforced by archaeological and socio-anthropological inferences. Consistently with this, some have even seen the survival or revival of the Harappan urbanism in the early historical urbanism in India (64). The possible mechanism of the surviving and reviving forces has gained strength in recent years by the discovery of settlements of the later 'Harappan Civilization' in Gujarat and in the upper GangaYamuna *doab* and have been increasingly being discussed since the new-found ultra-nationalism in India and the use of archaeology for serving the 'national interest'. Increasingly strengthened Hindutva forces have also given an impetus to the studies of the Late Harappan cultures to see if some connections could be found between the later Indian urbanization with the Harappan Civilization.

Somehow Rangpur, a partially Late Harappan site in Gujarat, is figuring out prominently in these discussion. Here the Late Harappan culture is believed to have given way to a phase that was transitional (Period IIC) which, in turn, gave rise to a period of relative prosperity (Period III). Periods IIC and III have been dated to 1100-to-1000 and 1000- to-800 BC, respectively, thus bringing the end of Rangpur near the beginning of the historical period, so that the possibility of Harappan survival in the latter does not look remote. Further, the Lustrous Red Ware, which started in Period IIC and became exuberant in Period III, has been found in Period IC of Ahar in south-western Rajasthan, in Period IV of Navdatoli in Malwa and in Period IE of Prakash in the upper Deccan, so that it cannot be regarded as having been confined to the Gujarat corner. As it has been held that in Period IIC of Rangpur "it is only the resurgence of the Harappan culture in a new garb that we notice", (65) and that the culture of Period III was basically Harappan, the occurrence elsewhere of the characteristic ceramics of the two periods, namely the Lustrous Red Ware, has been thought to be due to a 'mass movement (of the neoHarappans) from the Kathiawar peninsula to central India and the Deccan" (65). The implication of this belief - namely the movement of Harappan elements into the heart of India - is obvious.

While Period lIB of the site may be conceded to be a degenerate continuation of the Harappa culture, Periods lIe and III seem to present a definite departure from the preceding phases. In these Periods the painted designs on pots are non-Harappan, and the practice of burnishing pots with haematite was also new, unknown to the Harappans. The alleged continuity of pottery-types has not been convincingly demonstrated and is at best confined to a very limited number of types against a vast range of shapes found in these periods. Of the over one hundred graffiti occurring on the pottery of all periods of Rangpur, most of them on that of Periods IIC and III, eighty have no parallels in the Indus script, and most of the remaining ones have elementary resemblances. It is therefore unjustified to claim that they suggest the survival of the Indus script (64).

Our concern, however, is not to assess whether Period III of Rangpur was derived from the Harappa but to examine if the urban tradition of the Harappa could have in any way influenced and promoted

the latter-day urbanism through Rangpur, central India and the upper Deccan, contact among which is provided by the Lustrous Red Ware, a supposed derivative or evolution of the Harappan ware. The answer should be clearly in the negative (64). It is now certain that there was a wide gap of seven to nine hundred years between the disappearance of these chalcolithic cultures and the emergence of the historic period in the regions of their occurrence, so that the chances of the former having anything to do with the latter are extremely remote. And even more remote, actually non-existent, is the likelihood of any Harappan urban tradition filtering through them into northern India, where the historical cities sprang up not earlier than 500 BC. Any belief to the contrary would involve the following assumptions, all of them unproven (64):

- Periods IIC and III of Rangpur were direct evolutions from the urban Harappa;
- through these Periods of Rangpur, Harappan urban tradition intruded into the rural chalcolithic cultures of Malwa and the upper Deccan; and
- this tradition lasted long enough in time and space to provide the stimulus for the establishment of cities in northern India in the early historical period, though the chalcolithic cultures themselves disappeared in the regions of their occurrence several centuries ago.

The evidence for Harappan influences on the southern neolithic cultures is also extremely vague. Black-on-red pottery, one of the constituents of this culture, is ubiquitous, as designs in black show best on a red surface. To say that the neolithic folk adopted the Harappan tradition of painting pots *but not the potter's wheel* is to give away the show; surely, if there was any borrowing at all, it would have been of the technology of the potter's wheel rather than of the tradition of potpainting (64).

Also widespread is the argument of parallelsided blades produced by the crested-ridgeguiding technique. The length of the blade would naturally depend on the availability of long or short silicious mineral cores out of which the blades were produced. Thus, the Harappans themselves produced short blades at sites away from the Sukkur-Rohri quarry in Sind in addition to importing cores from that quarry when and where imports were possible. Long blades are absent in the chalcolithic equipment of central India due to the obvious reason of the absence of long cores in the region.The southern sites have long, medium and short blades, in addition to non-blades and asymmetrical and non-geometric tools, all produced out of local material to satisfy local needs. Any attempt to see Harappan traits in the long blades of the southern neolithic, which produced other tool-types as well, is to ignore the factor of conditioning ecology (64) .

Further south, two Harappan elements have been hesitatingly recognized in the South Indian neolithic-chalcolithic culture but vigorously presented as evidence: (1) the tradition of producing long parallel-sided blades of chert by the crested-ridge-guiding technique; and (2) the practice of painting red pots in black, though it is conceded that the painted designs have nothing in common with the Harappan ones and that the practice itself could have been derived from the chalcolithic cultures of central India and northern Deccan. It has also been thought possible that the Harappans derived their gold from the Mysore gold-fields, thus indicating Harappan contacts with the south, though it is admitted that the metal was available nearer the Harappan cities, for example near Kandahar in Afghanistan and could be panned in the waters of the Jhelum.

An all-round regression, technological and otherwise, is unmistakably noticeable in all these cultures, which by themselves could not revert the urban stage. A further regression seems to have taken place and persisted for a long time in central India and the upper Deccan after their fall, till civilizing forces from the north reached the region in the second half of the first millennium BC. As Wheeler

has aptly remarked: 'Civilization came to central-India with a bang.' (67).

The archaeological evidence for a connection of the later Indian urbanization has also been adduced by S.R.Rao (65,66) from a doubtful connection between the Ochre-Colored-Ware “Harappan pottery” to Ganga-Jamuna Doab, through the Painted Grey Ware Levels at Hastinapur and the intervening black-and-red ware levels at Noh and Atranjikhera, all in the Doab region. In fact Rao has no hesitation in regarding the whole gamut of the Ochre-Colored Ware as *inferior Harappans* (66). “There is a clear line of succession here”, Rao declares (65). According to him, on the whole, there was no cultural break but a continuous devolution and transformation over time. Moreover, it was these successor cultures in Gujarat and their links with chalcolithic cultures in Central India and Rajasthan that, Rao believed, would help to explain the existence of Harappan elements in Indian culture. It was precisely against this straight line of succession, through which Harappan elements were supposed to have survived and then again revived in historical India, that Ghosh outlined a series of objections.

Some other historians have also been deeply skeptical about the importance of the Harappan legacy and the extent of its contribution to later Indian cultures. Wheeler was one of these and the sole paragraph that he devoted to this question in his immensely popular work, *The Indus Civilization*, made it reasonably clear that, as far as he was concerned, the Harappans did *not* contribute to the general development of civilization in the way that Mesopotamia did in the West. A. Ghosh provided a more thoughtful and detailed critique (64) of this idea of cultural 'gradients' that were believed to have moved down from Harappan times to the historical period. 'Harappan urbanism could not have even remotely produced or inspired the historical urbanism', he argued, because there was no perceptible link between them. In the same way, it did not make much sense to 'see Siva-pasupati in the well-known and much-spoken-of seal of Mohenjodaro, which depicts wild animals', since *pasupati* in later Vedic literature was an appellation used not for a general lord of the beasts but with specific reference to cattle. Ghosh's work was also concerned with the larger problem of the cultural identity of the chalcolithic cultures that followed the demise of Harappan urbanism. Ghosh argued against the idea that these cultures were transmitters of the Harappan legacy.

Not much can at present be said about the Late Harappan sites in the upper Ganga-Yamuna *doab.* The identity of a few such sites is no longer in doubt, but entirely dubious is the derivation of the ochre-colored ware from the Late Harappan ware (64). It has all along been felt that long immersion under water imparted to red pottery a seemingly under-fired look, rolled edges and a surface that wears off with rubbing. But it is becoming increasingly doubtful if the pottery found at different and wide-apart sites was typologically and industrially identical and its remaining under water was the result of a single flood engulfing several thousand square kilometers of land or of different water-logging at individual sites, as some later-day Indian archaeologists maintain. All this remains problematic at present and until all questions are answered satisfactorily and the identity of a culture or, at any rate, a distinct ceramic industry represented by the OchreColored ware is established, the matter has no relevance to the Harappan Civilization. All the scanty data at present available taken into consideration, the possibility of Harappan urbanism surviving or resuscitating in the upper Ganga basin through the Late Harappan and ochre-colored ware sites in the middle of the first millennium BC may as well be rejected, particularly as the successor-cultures of the ochre-colored ware.

Chakrabarti (68) suggests that the idea itself - that is, of a cultural phase that followed and had devolved from the mature Harappan one - is not particularly new and goes back to N.G. Majumdar's

observations in 1934 about Jhukar, Lohumjodaro and certain sites around Lake Manchar in Sindh. But he forgets that there have been scholars who have considered the cultures that followed as representing a non-Harappan tradition. Readers will recall Mortimer Wheeler's identification of the 'Cemetery H' people at Harappa, who occupied the site after the demise of the city there, with the alien Aryans. Similarly, Piggott considered the Jhukar culture of Sindh as unrelated to the antecedent Harappan one, and as representing an intrusive, non-Harappa stratum'. Later Naushahro and Pirak on the Kachi plain have, figuratively speaking, taken over that role from the sites of Sindh, and a 'break' with the Harappan style there has been taken to indicate a major folk movement from the north (69) Mughal's excavations at Jhukar in Sind demonstrated that the Jhukar pottery there was associated with Mature Harappan ceramics in the later period, and thus was 'indicative of change in Harappan material culture rather than a break'. This is in contradiction to Piggott who surmise about the so-called Jhukar culture as exotic and non-Harappan.

There is a counter argument to the position held by Piggott, Wheeler, and Ghosh. The folk communities often retain craft traditions from previous generations. It is thus possible that the postHarappan cultures may have retained some of the craft traditions and other elements of the Harappan culture, such as pottery and tool making. Arbitrarily speaking, many aspects of the Harappan domestic life, like the house plans, disposition of water supply and attention to bathing survived in some settlements of the subsequent periods. The traditional weight and currency system of Pakistan and India, based on the multiple of eight as the unit might have something to do with the Harappan system. The techniques of making pottery on potter's wheel in Pakistan are similar to those used by the Harappans. The flat-bottom boats floating on the Indus in modem Pakistan were already present in the Harappan cities. There is a most interesting continuity in the craft of faience but not in crafting long carnelian beads or carving ivory.

In the Indus region today there is continuing usage of many Harappan motifs on pottery and embroidered fabrics. Bullock carts identical to those depicted by Harappan 'toy carts' still ply on the rural roads of Sindth, and the terracotta toys so similar to those seen in Harappan museums have been in use till very recent times in Punjab and Sindh. The house structures, even the floor plans, are very similar to those in Harappan cities all over the country, a number of wells accessible through tangential stairs downwards, were still found attached to Hindu temples in Punjab till the Partition when all of them were abandoned as the devotees left for India. Beyond these physical clues in economic and social relations, an important part of the Harappan legacy likely to be most strongly evident is in religious beliefs and ideology in the later Indian and Pakistani cultures. The use of the ‘sacred word‘ (the *mantras* in India and the *Taweez* in Pakistan), the concept of *Bhoots* in India and the *Jinns* in Pakistan (making themselves manifest in large trees), and the shamanic practices throughout Pakistan, may in fact be the remnants from the Indus Age.

To put it another way, over the years, the details that have become available about cultural configurations that followed the mature urban form do not quite fit with the 'all-round regression' postulated in Ghosh's argument. Ghosh's idea of an unbridgeable gulf between the Harappan civilization and later chalcolithic cultures and early historic India may be too rigid in view of both the geographical and chronological depth of the Indus phenomenon. Perhaps some of the elements that make up the basic pattern of the Late/post Harappan mosaic merit a closer scrutiny. Any such analysis must bear in mind that in the aftermath of the Harappan phenomenon there is no cultural cohesion or artifactual uniformity of the kind that was a hallmark of that civilization. Instead of an urban *civilization*, there are *cultures*, each with its own distinct identity.

The interpretation of post-Harappan history and the extent of the Harappan influence on sub- sequent cultures is still a matter of debate. Some of the remnants of the Indus tradition are routinely extended to the practices in Indian culture. Such an exaggerations are uncalled for. For one, there is no obvious signs of a "cultural continuity" between the demise of the Harappan Civilization and the rise of chalcolithic villages across the Indus plains or across the borders in India. Second, there is long period of time between the end of the Indus urbanism and the rise of towns and cities in the Ganga-Jamuna plains. Third, the reemergence of towns and cities in the subcontinent did not begin in the Gangetic plains, cities reemerged first in the north of Punjab, in the socalled Gandhara country and these cities, such as ancient Taxila, had no cultural familiarity with any of the Harappan cities.

Questioning Collapse: Although the end of the Harappan Civilization is widely accepted, there is a group of archaeologists, anthropologists, and prehistorians who have questioned this notion. There are a few scholars who even question on theoretical grounds the very idea of the collapse of a civilization. They rely on the concept of human resilience and its usefulness for understanding change, both past and present.

Over three decades ago the sociologist Shmuel Eisenstadt wrote that societal collapse seldom occurs if collapse is taken to mean "the complete end of those political systems and their accompanying civilizational framework". Norman Yoffee and Patricia McAnany (41) chime in: "When closely examined, the overriding human story is one of survival and regeneration. Certainly crises existed, political forms changed, and landscape were altered, but rarely did societies collapse in an absolute and apocalyptic sense". Such a position is, of course, completely opposite to that of Jared Diamond (42), who proposed that a number of societies failed because they did not make right choices for their survivals. It is also opposed to several other authors and researchers of early civilizations, such as Tainter (1) who showed that civilizations are borne and they also die.

In the Harappan context, Possehl is one of those scholars who do not believe that the Indus Civilization ever came to an end. The level of socio-cultural attainments which existed throughout its Mature phase was slowed down in its later stage, it was centrally less organized, less differentiated and less specialized than the Urban phase but it was still a continuum of the preceding cultural flow. He doubts that stratigraphic dead ends (the termination of a certain kind of material culture in the vertical sequence of a site) mean the end of a tradition: "a state it was that died", he argued in 1979, "not the Harappan civilization or its pottery and other material constituents". Similarly, Shaffer considered it a process of decentralization and localization which gave rise to regional cultural expressions rather than extinction (43). Allchins go even further; according to them, "what is probably important in understanding the cultural development of the post-Urban phase is that throughout every province of the Indus Civilization societies survived which, while losing the distinctive characteristics of the Indus Civilization, nonetheless retained a broadly 'Harappan' tradition in other respects" (44). These opinions, in effect, downplay the disintegration and the eventual end of the Harappan Civilization and, instead, stress the continuity of the Indus culture into the early historic times. "If you seek a legacy, look about you" the Allchins noted (45). Fairservis (46) put it more romantically when he said that "the answer to the question as to why the Harappan Civilization fell is that it didn't fall at all! It simply stood at the beginning of the mainstream of Indian culture and faded into that current, having brought to it acts of faith, class morality, aspects of technology, and perhaps a cosmology which heralded the eventual supreme achievement that was medieval India". These opinions are, of course, extreme as the weight of evidence is truly in favor of the end, the demise, the fall, the collapse of the Indus Civilization, whatever one chooses to call the phenomenon. There is no

evidence for it "fading into the mainstream of the Indian culture", nor is there any evidence for a manifest continuity of the Indus cultural tradition beyond the early second millennium BC.

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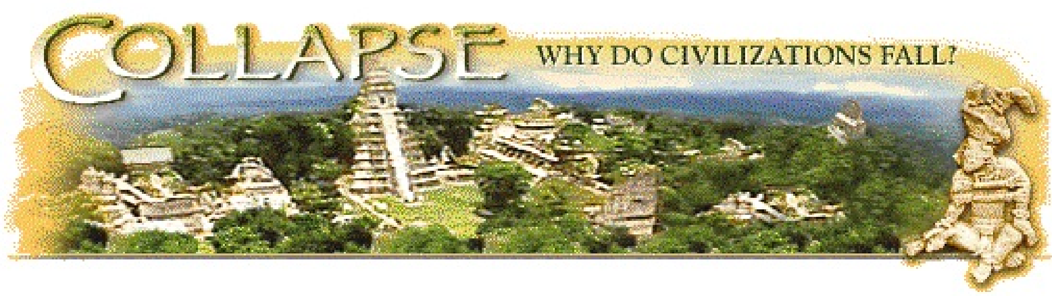
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Chapter IV.3.

The Collapse of the Harappan Civilization: the Enabling Factors



The image of the origins of the Indus Civilization is compelling but more so is its decay and demise. What happened? How could such a flourishing civilization could collapse with such a speed and with such a clean sweep? Did the people degrade their environment, did the climate change, or did civil conflict lead to collapse? Did foreign invaders put these magnificent cities to an end? Or, is there some mysterious, internal dynamic to the rise and fall of all civilizations? Some of us are fascinated by these questions and want to learn more. Some of us encounter the dilemma of fallen cities and peaceful living in casual reading. The image is troublesome to all, not only for the vast human endeavors that have mysteriously failed, but also for the enduring implication of these failures in the history of ancient peoples, including those of ancient Pakistan.

Indus Civilization was not the only civilization that flourished for sometime and then collapsed; there were scores of them. For most of them we know as little as we know for the Indus Civilization but for a few we know much more: the name of the Roman Empire quickly comes to our mind. The theories on the collapse of the Indus Civilization are strong on speculations but weak on evidence. Reason is simple; There are no written records, there are no commentaries just after the collapse, there is no coherent picture of the post-Harappan landscape. In view of this situation, our source of information or at least that of informed speculations is the comparative studies of other early civilizations. Some of these civilizations have been better studied and we may learn something which could be applicable to the collapse of the Indus Civilization. This is a work of archaeology and history, but more basically of social theory. We examine these theories and hope that it may serve to understand the 'causes' or the 'enabling factors' of the collapse of the Indus Civilization.

Human history as a whole has been characterized by a seemingly inexorable trend toward higher levels of complexity, specialization, and sociopolitical control, processing of greater quantities of energy and information, formation of ever larger settlements, and development of more complex and capable technologies. This persistent aspect of our history has rightfully received an overwhelming amount of research, so that today we are beginning to understand how this came about. Yet the instances when this almost universal trend has been disrupted by collapse have not received a corresponding level of attention. To be sure, innumerable writers have produced myriad explanations of collapse; but even so, understanding disintegration has remained a distinctly minor concern in the social sciences.

Explanations of collapse have tended to be *ad hoc*, pertaining only to one or a few societies, so that a general understanding remains elusive. At the same time, as will be shown, such theories have suffered in common from a number of conceptual and logical failings. Although a lot has been written on why such and such empire, state, or an entire civilization collapsed, beginning from the classic Greek period to the great Muslim historian Ibn Khaldun, to the most recent times, these studies

have been case-specific. It is only in recent years that collapse of civilizations has started to be discussed as a universal phenomenon and the cross-referrals to other cases have come in vogue. Here we do not indulge ourselves in search of a universal solution to collapse, a universal solution which could be equally applicable to the Harappan Civilization as it did to other civilizations. At the same time, however, we do not want to shy away from ideas that have been proposed for explaining the collapse of some other civilizations in other parts of the world.

The Harappan Civilization did not last very long, merely a short period of five to seven centuries. In this respect it was rather a fragile, impermanent thing. This fact inevitably captures our attention, and however we might wish otherwise, prompts disturbing questions. Although collapse of this civilization has been of interest since its very discovery on the Indus plains, it has remained a mystery for historians, social scientists, and archaeologists alike. Perhaps because of

this, the development of political complexity, the 'origins', of the Harappan Civilization has attracted more scholarly attention than collapse, its antithesis. It is not for lack of effort that collapse of the Harappan Civilization is still a little understood process. The research devoted to this subject is substantial, and has produced a literature which clearly reflects the significance of the topic. But, most of this literature is *ad hock*, somewhat superficial, mostly reiterating the opinions of the preceding scholars, and devoid of any comparison with other civilizations. The result is that, in the words of Dales (2), the decline and fall of the Indus Civilization remains "one of the most enigmatic whodunits of antiquity".

The proposed perpetrators of this great evil have ranged from invading Aryan hordes, to Mother Nature, to the Harappans themselves. A number of theories have been propounded; some of them will be discussed in the followings. Most of these are just opinions, without any evidence, archaeological or otherwise, and most of them are internally inconsistent. Some of these speculations have been repeated so often that they have become the fact: the drying up of the "Sarasvati" (the Ghaggar-Hakra River braids) as the cause of the decline is one such example. In the followings, we shall attempt to review these theories from a global perspective, making use of the vast amount of material offered by Tainter (1). We may still not reach a conclusion, but at least it should provide us with a sound foundation for our speculations.

Classification of Theories: While greater scientific attention has been devoted to the emergence of civilizations than to their collapse, the literature on the latter subject is still voluminous, and the diversity of ideas impressive. True, these range from respectable and scholarly to some that provide only comic relief. These theories fall into a limited number of recurrent explanatory themes. Within each theme, of course, a great deal of diversity still exists, so that some level of individual discussion is necessary for many authors.

It is common in the social sciences to write of internal *vs*. external causes of social change, and the study of collapse can be similarly dichotomized. Similarly, just as one can write of conflict *vs*. integration theories of change (see Chapter I.1), so such theories have been advanced to account for collapse. However, neither dichotomy is useful for this work, although both are certainly valid.

Joseph Tainter (1) lists 10 odd categories of theories that have been offered to explain the collapse of some early historic and prehistoric civilizations. He then adds one of his own. It appears that almost all of these theories have some relevance to the case of the Harappan Civilization, we therefore choose to follow this list, though regrouping these factors somewhat differently. As simple as it is to

present this classification, there are still ambiguities. There is much overlap in the categories listed, while some themes could be subdivided further. The assignment of authors to themes adds another level of uncertainty, for many fall easily into more than one class. Other investigators, including the authors so classified, might legitimately assign writers to different themes, or even devise an alternative classification. The present classification is based on an assessment of the *major* approaches and assumptions.

Enabling Factors for the Collapse of Civilizations

Event-based factors:
Floods
Shifting river courses
Tectonic upheavals
Disease and pestilence
Chance of concatenation of events

External Factors
Competition with other complex societies Decrease in trade
Intruders

Economic Factors
Tainter's theory of Marginal Returns
Depletion of Vital Resources
Ecological degradation
Climate Change (shifting rain pattern) New resource base
Social and Cultural Issues:
Insufficient response to circumstances Social imbalance, Internal strife of the elites, revolts of the peasants, etc.
Social dysfunction
Mystical factors (e.g. Decadence)

EVENT-BASED FACTORS

Single-event catastrophes, such things as floods, hurricanes, volcanic eruptions, earthquakes, or major disease epidemics, are enduring favorites for explaining collapse (3). There is something so appealing in simple solutions to complex processes that it is not likely such ideas will ever go out of fashion. It is interesting to note that students of paleontology are as attracted to simple catastrophe theories to explain the disappearance of the dinosaurs, or other life forms, as social scientists are for understanding collapse (4). Catastrophe scenarios are old. Plato's *Critias* and *Timaeus* characterize the demise of the mythical Atlantis in such terms. The Biblical flood, and similar stories, fall into this theme.
Several catastrophic events have been invoked for the destruction of the Harappan cities; catastrophic floods for the destruction of Mohenjodaro, earthquake for the demolition of Kalibanghan, and a series of tectonic activities in Makran for shaking up the environment around Sutkagern-dor and Sotka-koh. Although these theories may be successful in explaining the abandonment or destruction of individual cities, they all fail to account for the fall of the Indus Civilization in its totality at more-or-less the same time. How the destruction of one city by an earthquake, for example, could bring down the whole Indus Valley or how a spread of pestilence in the south effect the vast area in the

north? Such objections are acknowledged by the proponents of catastrophic theories but not addressed adequately.



Floods *:* A central feature of the distribution area of the Harappan Civilization is the alluvial character of the land in which the majority of its settlements flourished. Mohenjo-daro, Chanhu-daro and Kot Diji grew in the vicinity of the Indus; Harappa on the Ravi; Ropar on the banks of the Sutlej; and Ganweriwala, and Kalibangan on Ghaggar-Hakra river-braids. In Gujarat too, the Bhadar and Sabarmati rivers provided the setting for Rangpur and Lothal, respectively. The dynamic histories of many of these rivers is the other element which has been so striking. This theme has attracted a great deal of attention and research. Innumerable meander scars, sand encroachments and depressions, all apparently fragments of old drainage systems, have been identified - not only in the core Indus flood plain but in many other areas as well.

Inevitably, the debate over the end of the Indus Civilization has been strongly influenced by this geographical frame of reference. That the rivers which nurtured the Harappans also wreaked fatal devastation. Apart from its historiographic significance, the description of silt debris intervening between phases of occupation there helps us in visualizing the character of Indus floods and the possible damage that Mackay believed they had wrought. He wrote that “the people of the Harappan culture, both at Mohenjo-daro and Chanhudaro, found in their erratic river an enemy much more to be feared than any invader from outside'. In fact, he was convinced that 'the decline of the great civilization...was due to the impossibility of occupying sites that were continually being surrounded by large sheets of water”.

Mackay reached this conclusion on the basis of archaeological record at Mohenjo-daro, which showed that various periods of occupation were separated by evidence of deep flooding. This can be inferred from the fact that the houses and streets of Mohenjo-daro were covered with silty clay and collapsed building material many times in its later history. This silty clay seems to have been left by the flood waters which had ostensibly submerged the streets and houses of the city. The people of Mohenjo-daro again built up houses and streets on top of the debris of the previous buildings, after the floods had receded but they apparently tired themselves out, trying to cope with these recurring floods. A stage came when the impoverished Harappans could not take it any more and they simply abandoned the settlement.

Even before Mackay's work, Marshall had assumed that the inhabitants of Mohenjodaro, who depended in great measure on the Indus, must also have lived in ever-present dread of its inundations. Again, many decades later, the destructive role of floods was invoked by S.R. Rao, now to explain the

devastation of Lothal. In his report on Lothal in 1979, S.R Rao argued for a


The great River in flood

series of overwhelming floods at the end of virtually each phase of occupation at the site: 'as a sequel to the great flood at the end of Phase IV the destruction of the township and dock at Lothal was complete'.

If the focus of Mackay and Rao has been on the detrimental inundations of unpredictable rivers, M.R. Sahni considered in 1956, perhaps for the first time, that the waters that devastated Harappan sites, at least in Sind, were not part of the normal regimen of over-flooding and siltation. Instead, the flood that destroyed the civilization was unprecedented and a product of earthquakes. A collision of earth plates resulted in the uplifting of land. Consequently, the Indus was dammed, leading to the submergence of large areas of the lower plains. The tectonic episode of 1819, when violent earth movements resulted in the creation of a dam *(Allah Bund)* across the eastern channel of the Indus in Kutch provided an ethnographic analogy to what was being posited. Sahni found unconsolidated thick alluvium containing freshwater shells. This suggested to him an exceptional rise in water level and a period of long submergence. He also discovered two settlements in Sind which he believed were of Harappan vintage. These were covered with thick alluvium, deposited by floods, which must have destroyed the settlements.

The argument for floods in the Harappan case is that earthquakes (to which Sind is prone) could have pushed up the ground so as to obstruct the flow of the Indus in its channel, as has occurred occasionally in later history. It was argued by Raikes (75) and Dales (77) that the waters of the Indus were thereby pushed back, created gigantic flooas, and engulfed Mohenjo-daro in mud. However, what they interpreted as water- laid mud or silt or silty-clay were, according to others, the mud platforms built to raise structures, and even wind-deposited material.

Lambrick's argued (5) for major shifts in the channel' of the Indus. These may well have occurred, but we can make out no pattern in the locations of early, Mature Harappan, and Late Harappan sites that can be read as adjustments to such shifts. So too, sea level change, also a global phenomenon, is known to have occurred. Worldwide rises in sea level (by about 2 m) are recorded for around 3000 BC - when low shorelines would have been submerged and rivers would have entered cycles of aggradation- as well as falls of about 2 m around 2200 BC, which latter can reflect dry periods with reduced flow in rivers (5). For Makran, Besenval (87) records a fall of 5 to 7 m in sea level after about 2000 BC. At Sharjah, Bahrain and Kuwait, geomorphologists found that the sea level was above the present level until about 2000 BC, when it fell a little below the present level for a short period. It remains, however, for us to investigate what the lowering/withdrawal of the sea meant for particular coastal settlemen tsp and their economies, or for harbors where cargo boats would come to load or unload, or the repercussions, if any, on the depth of the subsoil water.

The flood theory was put in its most comprehensive form by R.L. Raikes in context of Mohenjodaro (74,75). He argued that the total accumulated depth of the silt both below and above the modern plain was about 21 m or more. The accumulation of silty clay of this kind could not be explained by the normal flood regime of the Indus but required the emergence of a lake south and downstream of Mohenjodaro. This lake could in its turn be due to the damming of the Indus course downstream of Mohenjodaro by some tectonic upheaval. The dam which came up was permeable, allowing the water to seep through, but the clay of the silt would have been retained and accumulated till it engulfed, so to speak, Mohenjodaro. Raikes' theory generated a lot of discussion and was debated even on the technical ground of the composition of his 'silty-clay' and other grounds.

This grand theory of the catastrophic fall of the Harappan Civilization is not accepted by many scholars. H.T. Lambrick (5), for example, points out that the idea that a river would be dammed in such a manner even by tectonic uplifts is incorrect due to two reasons:
i) Even if an earthquake artificially raised a bund

down stream, the large volume of water from the Indus would easily breach it. In recent times in Sind, a swell of ground raised by the earthquake of 1819 was breached by the first flood it faced from one of the smaller streams of the Indus called Nara.

ii) Silt deposition would parallel the rising sequence of water in the hypothetical lake. It would take place along the bottom of the former course of the river. Thus, the silt of Mohenjo-daro might not be the deposition of a flood. Lambrick hypothesized (5) that the silt observed in the city is actually the product of wind action blowing in lots of sand and silt. This, combined with disintegrating mud, mud brick and baked brick structures, produced what has been mistaken for silt produced by floods.

Possehl asks: Is it necessary to believe that just because the Indus river was impounded, the Harappan Civilization came to an end? If the Mature Harappan culture succumbed to new and unpredictable riverine forces, the explanation sought by historians and social scientists lies not directly with geomorphological matters but, rather, with the internal structure of the Harappan way of life. The "flaw" that would have led to such catastrophic socio-cultural change is not to be found within the natural world of geomorphology but within the human context of the Harappan civilization, its society and culture (6).

Having said that, we would hasten to add that the Indus did affect the fortunes of the Harappans in more than one way. Frequent floods were sapping their energy. Their raised platforms and massive bunds indicate the severity of the problem. The Indus River has been raising its flood level, continuously necessitating safeguard measures. The water table could itself rise, thus destablizing buildings, causing salinity increase and rendering vast tracts useless for agriculture. The Indus could also leave Mohenjo-daro and other cities high and dry by changing its courses drastically. Whether these travails make the Hardpans leave their dwellings and move elsewhere, is, of course, another question.

Shifting Rivers: Lambrick offered his own explanation for the decline (5). He believed that changes in the course of the River Indus could be the cause of the destruction of Mohenjodaro. The Indus is an unstable river system which keeps shifting its bed. The people of the city and the surrounding food production villages deserted the area because they were starved of water. This kind of thing happened many times in the history



of Mohenjo-daro. Apparently, the river shifted about thirty miles away from Mohenjo-daro.

This theory too cannot explain the decline of the Harappan Civilization in its totality. At best, it can explain the desertion of Mohenjo-daro. And, if the people of Mohenjo-daro were familiar with the kinds of shifts in the river course why could not they themselves shift to some new settlement and establish another city like Mohenjo-daro? Furthermore, if they could handle the consequences of the river shifts thirty times before, what befell them not to be the same resilience bunch now? Obviously, it appears that some other factors were at work.

The urban site of Kalibangan is located in the Indian Punjab and was, like Mohenjo-daro, abandoned in the 18th century BC. Here Raikes found the soil a "coarse grayish sand very similar in mineral content to that found in the bed of the present day Yamuna", the main river of the area. Raikes' hydrological and archaeological investigations indicate an "alternating capture of the Yamuna by the Indus and Ganges systems respectively" (7). Put simply, the Yamuna river switched back and forth between two primary river channels, causing abandonment or development of settlements, depending on the location of the allimportant river.

As in Sindh, this natural phenomena does not seem to have caused an immediate and complete abandonment of Kalibangan, but rather a decrease in settlement size followed by a total abandonment after the water table eventually dropped so low that water could not be reached through well drilling. The quick rebirth of the site after the return of the Ghaggar is evidenced by the almost total lack of fired brick at the sites in their first century of redevelopment. This is due to the fact that the tamerisk forests, necessary for the firing of brick and themselves dependent on a local river for their growth, would have taken 100 years to be restored after the return of the river. As for the potential implication of this occurrence for the rest of the Indus Valley Civilization, Raikes notes that "in Sindh it would merely have been one more nail in a coffin already well closed" (7).

Like floods, the theory of shifting rivers is plausible only for specific sites, it fails to explain the decline of all Harappan sites and the abandonment of the vast area as the Harappans did.



Rivers Sutlej and Yamuna are supposed to be the tributaries of the “Sarasvati”. Because of some tectonic disturbances, the Sutlej stream was captured by the Indus River and the Yamuna shifted east to join the Ganges. This kind of change in the river regime, which left the holy river waterless, would have catastrophic implication for the towns located in the Ghaggar-Hakra basin. Apparently, this story has also been accepted by western scholars without a critical look (33,43,44,45).

Interesting though this theory is, it has some problems. The drying up of the Ghaggar was not dated properly till very recent times. It also does not explain why the settlements around Harappa and Mohenjo-daro, as well as those on the west bank of the Indus were also abandoned. For these authors, the Ghaggar-Hakra region represented the core region of the Harappan Civilization; if the ‘core’ dried up, so did the whole civilization up to Sokta-Koh in southern Baluchistan! The Ghaggar-Hakra water streams did dry up at certain point in history and it did cause shifting of settlement sites in the region, but how could this event in a limited and specific area could affect the whole Indus Valley?

Tectonic Upheavals in the South: The importance of plate tectonics in the physical geography and cultural history of Pakistan is today well recognized (76,77). The evidence for this is simple and indisputable: Harappan seaports along the Makran coast, such

Drying up the ‘Sarasvati’: The hypothesis of drying up of “Sarasvati” (the Ghaggar-Hakra River braids) has been offered as a cause for the collapse of the Harappan Civilization; it is now a favorite topic with most of the Indian scholars of ultra-nationalist colors.
as Sutkagendor, Sotka Koh,

and Balakot, are now as far as 50 km inland. "These displaced ports make it evident that the coastline of Baluchistan had risen considerably during the past 4,000 years, with the initial rise apparently having occurred during the Harappan period" (8). The earthquakes associated with such an uplift would have been tremendous and the disruption of sea and land trade networks would have been devastating. The proximity to Arabian sea trade routes was, after all, the *raison d'etre* for sites such as Sutkagen Dor and Sutkha Koh. This tectonic uplift, then, would explain the demise of several Harappan coastal sites, as well as imply a hardship for many other Harappan sites which were dependent on these coastal sites for trade and/or marine resources. Geological evidence for such an event is, however, hard to come by. Additionally, how could the disruption of coastal trade affect the trade routes that converged on Harappa, for example? Even if it did, why the Harappan could not develop alternative trade routes?

Disease and Pestilence: Another speculation is that the Harappans got inflicted with some epidemic that decimated their population. This is a very weak argument because in archaeological record we do not observe a drastic decrease in population in the core area. Secondly, no sign of any unusual disease has been noticed in the skeletal analysis by Hemphill and Kennedy (9). The most prominent ailment was Malaria and this has been the fate of South Asia for a long time.

Chance Concatenation of Events: It is evident that no single catastrophic event could have brought the a civilization like the Indus Civilization to its knees. There must be a chance concatenation to have profound effect and quite a few scholars subscribe to this opinion. They would refer to Willey and Shimkin on the Maya (10), and Butzer on Egypt (11,12), where concurrent outbreaks of clusters of problems and weaknesses disintegrated their respective societies. The great Classical historian J. B. Bury (13) argued that there was no general explanation for the fall of Rome, that it resulted from a series of contingent events. The irruption of the Huns drove the Visigoths into the Illyrian provinces.

The Roman government mismanaged this problem, and so lost the disastrous battle of Hadrianople (A.D. 378). Federate barbarian nations were then settled within the empire, bad precedent. There was the treachery of Stilicho, and dependence on barbarians to man the army (13).

Charles Diehl argued that a combination of events led to the decay of Byzantium: loss of agricultural lands, the formation of large estates, and unsuccessful economic competition with the Venetians (14). It is argued by some that *all* history is a chance concatenation of events. This argument goes too far, but there is some validity to the notion that random factors influence all historic processes. But, to the extent that random factors occur with some statistical regularity over time, they cannot account for a phenomenon far more limited in its occurrence. In the Harappan case, no one has so far been able to cite a concatenation of catastrophic events, although such a belief is still commonplace.

A General Critique on Catastrophic Events: As obvious and favored as catastrophe scenarios are, they are generally among the weakest explanations of collapse. The fundamental problem is that complex societies routinely withstand catastrophes without collapsing. Thus, catastrophe arguments present an incomplete causal chain: the basic assumption, rarely explicated, must be that the catastrophes in question somehow exceeded the abilities of the societies to absorb and recover from disaster. As Tainter points out (1), if the assumption is correct, then the interesting factor is no longer the catastrophe but the society.

As a matter of practicality, though, catastrophe explanations are too simple to accommodate the complexities of human societies and the collapse process. Human societies encounter catastrophes all the time. They are an expectable aspect of life, and are routinely provided for through social, managerial, and economic arrangements. It is doubtful if any large society has ever succumbed to a single-event catastrophe. The cause of understanding is not advanced by the suggestion that collapse is caused by accidents. 'Accidents,' notes R. M. Adams, 'happen to all societies at all stages of their history ... ' (15). Too many societies encounter accidents without collapsing.

The analogies that catastrophe theorists advance to support their arguments actually weaken them. The eruption of Thera, for example, is often compared to the late-nineteenth-century eruption of Krakatoa in the South Pacific. To our knowledge, though, no complex society collapsed under Krakatoa's onslaught. Similarly, Brewbaker (16) cites the effect of the potato blight in Ireland to bolster his argument that maize mosaic virus could have caused the Mayan collapse. He fails, though, to point out to his readers that Ireland suffered no cessation of sociopolitical complexity as a result of this disaster.

Empirically, the eruption argument for the devastation of Crete falters on a dating problem. This eruption is currently dated toward the end of the Late Minoan period (*ca.* 1500 B.C.), whereas the widespread destruction on Crete occurred at the end of Late Minoan (*ca.* 1450 B.C.). The Cretans of *ca.* 1500 B.C. most likely stopped to watch the eruption of Thera, made whatever preparations were called for, and when it was all over went about their business. The argument that ash made east Crete barren seems odd compared with the effects of ash in northeastern Arizona, where the prehistoric eruption of Sunset Crater significantly improved local agriculture (17).

EXTERNAL FACTORS

Decrease in trade and barbarian invasions have been cited as the two of the most important external factors for the demise of some early civilizations. In the Harappan context, the trade, especially the

external trade, is mentioned quite often but the latter finds only an infrequent mention and this too in a negative tone - only to discredit the “Aryan Invasion” theory. The competition with other complex societies as a factor of collapse have also been mentioned in some cases but in the Harappan context such a scenario is unimaginable. It is well-known that there was no centrally organized state in the neighborhood of the Harappan Civilization with which it could have come into armed conflict. Archaeological record shows very few metal weapons in the Harappan remains and whatever are present, are very ineffective tools of war. Thus, while the armed struggle could have been a factor of civilizational decline in some societies, there is no sign of it in the Induds Valley.

Decrease in Trade: Ekholm (18) considers the loss of trade a case of resource depletion. He ascribes collapse of some civilizations to loss of trade networks, external resources, and imported goods. An economic system becomes fragile when it comes to depend on external exchange over which it has little control. Since civilizations are always dependent on access to foreign markets, they are intrinsically vulnerable in this regard. Ekholm accounts in this manner for the collapses of the Third Dynasty of Ur and of Mycenaean civilization, for regional instability in the Near East and the eastern Mediterranean *ca.* 2300-2200 B.C. Similarly, Robert Briffault in 1938 predicted the demise of the British Empire for reasons of unfavorable trade. Hodges and Whitehouse, in their critique of the Pirenne thesis (19), ascribe the post-Carolingian dark age to disruption of trade between Europe and the Near East, following the economic collapse of the Abbasids. Cipolla argues that the economic decline of Italy in recent centuries has resulted from unsuccessful competition in foreign trade (20).

Shereen Ratnagar makes a strong point in her *The End of the Great Harappan Tradition* as well as in *Encounters: The Westerly Trade of the Harappan Civilization* for the Harappan external trade as one of the important enabling factors in the collapse of the Indus Civilization. Harappan overseas trade involved supplying, to the agriculturally wealthy and densely populated Mesopotamia, crafted items such as decorated carnelian beads, gold, and lapis lazuli. We do not, for certain, know what Mesopotamian people sold to the Harappans in return. Practically nothing of the Mesopotamian origin has been found in the Indus Valley beyond one or two seals. Even here, their Mesopotamian origin is suspect.

Some time around the end of the Third Dynasty of Ur, trade between Mesopotamia and Meluhha (the Indus Valley, it is assumed) dropped off, supposedly because the Sumerians turned to Egypt and Arabia for the majority of their imported goods. Harappan artifacts are found in southern Mesopotamia up until about 1800 BC. Thereafter, the presence of lapis lazuli, for example, “declined sharply to the point where it may be suspected that the primary source was recycled stock....” (21), indicating the decline of Mesopotamian trade coterminous with the decline of the Harappan Civilization.

Ghosh postulates that "the cessation of trade at about 1900 B.C. must have had an adverse effect on the prosperity of the Harappan Civilization and must therefore have been one of the factors leading to the decay of the cities, to the deurbanization of the civilization and to the dispersal of the population" (22). Ghosh then states that due to the plethora of natural disasters which befell the Harappans, "the people were evidently so overwhelmed by their own troubles that they could no longer pursue the luxury of foreign trade" (22).

Was the external trade of such magnitude that its termination would cause the Harappan economy to collapse and undermine the position of the elite? First of all, it must be pointed out that in spite of all

that has been researched and written about, the volume of trade between the Indus Valley and Mesopotamia was not that large.The Indus people could obtain all the raw material from within their own area and need not go far to obtain them. This included copper and tin, as well as wood and leather. They had their fiber (cotton and wool) for their textiles, oil seeds for oil, and all the agricultural produce what Mesopotamia or anyone else could offer. This was not a case of an economic dependency. Naturally, if the foreign trade was not a significant factor in the Harappan economy, its cessation could not trigger a civilizational collapse.

Secondly, if trade was in luxury items, and if luxuries are for only a tiny segment of any given society (hence their role as luxuries), then surely a society is not dependent on luxuries for its entire existence. Also, if we can now, finally, accept that the phenomenon of the Indus Valley Civilization was an essentially indigenous development (not spawned by traveling Mesopotamians, after all), why must we once again turn to the West for the reasons for its fall? Simply put, the Mesopotamians could not have a direct role in the rise or the fall of the Harappan Civilization.



Intruders: External factors are not limited to overseas trade. One of the most common explanation for collapse ascribes it to the effects of intruding populations, typically at a lower level of complexity than the society on which they impinge. Such scenarios

are common in Europe, the Near East, and China, where literary traditions often refer to barbarian migrations. Intruder explanations are also to be found in the New World, more often in some areas than in others. The Indus Valley has been especially vulnerable to such intrusions from the West throughout its history and pro-history. One celebrated event in its history was the migration (erstwhile called the ‘invasion’) of the so-called *Aryans*. There must have been intrusions before; we know, there were a number of them thereafter.

Although the downfall of the Harappan Civilization has been frequently attributed to invading Aryans (23) who toppled this urban society by virtue of their simple organization and superior military technology (horses) (24), it was later shown that the Harappan society was already crumbling: 'Civilization was already effete and on the wane when the raiders came ... ' (24). It, however, does not mean that there were no other intrusions before the Aryans, or if the Aryans themselves did not give the Harappan Civilization a final push. Intrusion of ‘barbarians’ is a common theme in the literary accounts of many societies as a cause of civilizational collapse. These events generally happen when the civilized state is already weak for other reasons.

Less complex societies are frequently implicated in the fall of various Mesopotamian polities, often in Mesopotamian literary accounts. The downfall of Sargon of Akkad for instance, is attributed to Gutian invaders from the eastern mountains, while the fall of Ur is ascribed to Amorites and Elamites.

The collapse of the Hittite Empire, ca. 1200 B.C., is frequently seen as the action of migratory 'Sea Peoples,' who engulfed the Aegean and the eastern Mediterranean, and who were stopped only at the gates of Egypt. Some see the collapse as due to a combination of these invaders and the Hittites' traditional enemies, the barbarian Kaskas. Egyptian records speak of the Hittites as having fallen before such invaders.

Various authors assign the Minoan collapse to invading Mycenaean Greeks, themselves only recently the recipients of Minoan Civilization. Usually, some factor is invoked - the eruption of Thera or a great earthquake *ca.* 1500 B.C. - that weakened Cretan power and opened the door to mainland invasion. The destruction of Mycenaean Civilization by Dorian Greek invaders is the classic example of an intruder theory, and is endorsed by a variety of current scholars. The role of barbarians in the fall of the Roman Empire has been a subject of debate since the invasions themselves (25). It is a topic so well known that there is no need to discuss it in any depth here. The susceptibility of the northern frontier to barbarian incursions is a constant theme of Chinese history and the threat of barbaric invasions from the West has kept the rulers of Delhi on their toes in the medieval times.

Ibn Khaldun's Muqaddima , a fifteenth century Muslim historiographer and historian, analyzing the growth and decline of the Islamic civilization, for a long time influenced the theories of civilizational collapse. He suggested repeated invasions from nomadic peoples limited development and led to social collapse of the established civilizations and states.

Barbarian invasions have a clear attraction to collapse theorists, somewhat like catastrophe explanations. They provide a clean, simple resolution to a distressingly convoluted problem. As a *deus ex machina*, invasions are an old favorite in archaeological studies, where sudden episodes of cultural change may otherwise be difficult to explain. In some cases, fear of 'uncivilized' peoples has served to legitimize existing political arrangements, as well as taxation, military expenditures, and behavioral regimentation.

For Tainter, invasion explanations do not offer global coverage, being irrelevant in many cases. For him they are unsatisfactory in that a recurrent process - collapse - is explained by a random variable, by historical accident. “The overthrow of a dominant state by a weaker, tribally organized people is an event greatly in need of explanation.” (1). “Notwithstanding Service's 'Law of Evolutionary Potential,' complex societies are not dinosaurs, they do not fossilize, and they do not succumb to smaller states due to inertia.” (1) But such examples are aplenty in history: some complex societies were in fact dinosaurs, some of them did fossilize, and some of them did succumb to smaller states. Why should we reject a theory if it successfully explain some event but not all? The search for a universal theory is laudible but we should not invent one if it does not exis

Wheeler believed that the Harappan Civilization was destroyed by the Aryan invaders. It has been pointed out that in the late phases of occupation at Mohenjo-daro there are evidences of a massacre. Human skeletons have been found lying on the streets. The RgVeda refers to the fortresses of the Dasas and Dasyus, which the Vedic god Indra is supposed to have destroyed.

The geographical area of the habitation of the RgVedic people included eastern Afghanistan, the Pashtun country of Pakistan, northern Punjab and the Ghaggar-Hakra region. Since there are no remains of other cultural groups having forts in this area and in this historical phase, Wheeler believed that it was the Harappan cities that were being described in the RgVeda. In fact, the RgVeda mentions a place called *Hariyupiya*. This place was located on the bank of the River Ravi. The Aryans

fought a battle here. The name of the place sounds very similar to that of Harappa. These evidences led Wheeler to conclude that it was the Aryan invaders who destroyed the city of Harappa.

Attractive though this theory is, it is not acceptable to a host of scholars. They point out that the provisional date for the decline of the Harappan civilization is believed to be 1800 BC. The Aryans on the other hand are believed to have arrived here not earlier than around 1500 BC., probably more like 1200 BC. At the present state of knowledge it is difficult to revise either of the dates and so the Harappans and the Aryans are unlikely to have met each other. Also, neither Mohenjo-daro nor Harappa yield any other evidence of a military assault. The evidence of the human bodies lying exposed in the streets is important. This, however, could have been caused by raids by bandits from the surrounding hilly tracts. In any case, the big cities were already in a state of decay. This cannot be explained by the invasion hypothesis. Thus, considering the mass of evidence against it, the theory of Aryan invasions spelling doom for the Indus Valley Civilization can be cast off now as purely fanciful thinking.

There are very few takers for the Aryan Invasion theory now; but migrations of or raids by new peoples cannot be denied. Such intrusions are by no means specific to the Indus Valley, it has been the fate of almost all early civilizations who have been periodically subjected to low level invasions, raids, and encroachments by less ‘civilized’ people living on the peripheries of the state. It is a universal phenomenon. Often enough, they are merely raiders, interested only in pillage and loot, rather than in land and settlement. Often enough, also, they are nomads. These raiders, therefore, leave no trails of massive destruction such as those that Sea Peoples visited in a series of attacks between 1220 and 1150 BC on West Asia, heralding the literal end of the Bronze Age for an entire region.

Such peoples have been designated in history as the *Barbarians*. We will use the term here in a limited sense: a *barbarian* is simply a member of a political unit that is in direct contact with a state but that is not itself a state. Under this definition it is perfectly possible for a barbarian to be civilized in so far as he may be technologically sophisticated (like those modern Pashtuns reputed to make automatic rifles in blacksmiths' shops), or appreciative of the great tradition of nearby states (like many of the neighbors of the Romans and Han Chinese). He is a barbarian not because he is uncultured but because he is on the outside looking in. The tribal people of the Pashtun country of Pakistan and Afghanistan and the inhabitants of Baluchistan and eastern Iranian deserts are perfect examples. True, most of the barbarians of history have been not only outsiders but poor and aggressive as well, but this is a logical consequence of their outside status rather than a part of the definition. Their aggressiveness toward states, however, follows not from their poverty but from the generally perceived advantages of predation as a way of getting rich and the pattern in which riches are distributed within states.Thus, most barbarians, as defined, can be expected to be raiders, just as civilized tradition holds them to be.The real question is whether they are anything more than that.

Barbarians do appear to overthrow civilizations and states, and oftentimes have acted as wolfs to weaken prosperous societies by exhaustion. More often, however, in reality they are anything more than jackals - opportunistic minor predators feeding on victims that are already moribund. Large numbers of barbarians are much more likely to be conspicuously present at the time of death than either natural catastrophes or demonstrably unusual levels of inefficiency, corruption, and social conflicts. In fact, it is not easy to find a documented instance of a state that is destroyed politically, so that its former territory reverts at least temporarily to non-state organizational modes, in which the

immediate agents of destruction are not barbarians. The empirical frequency of barbarians' association with the fall of civilizations and state, therefore, leads one to conclude that their role is not entirely negligible (26).

What factors might allow a group of barbarians to overcome a state? Does the civilized society not have an almost insuperable advantage as long as its strength remains unsapped by poverty and dissension? Is it conceivable that civilizations and states in their prime as well as their senescence might be overthrown, indicating unambiguously that barbarian attacks are a primary cause? asks Bronson in his incisive article, *Role of Barbrians in the Fall of States* (26). To answer, we must consider not only the nature of the state in question but that of the barbarians as well. Here we mainly follow Bronson.

For one thing, it is evident that there were marked differences in effectiveness among those stateless peoples who had the opportunity to become barbarians - that is, who were historically in contact with established civilizations and states. The substantial percentage of the earth's surface held by states since antiquity indicates that numerous peoples did not do well in the barbarian role; a good many politically uncentralized groups, such as those living in ancient Pakistan, must have succumbed to the blandishments or legionaries of civilization immediately, and many others can have held out for only a century or two. However, some evidently did better, and a few became real stars of barbarianhood: the Mongols of the thirteenth century, the Moros of the sixteenth to twentieth centuries, the Pashtuns and other Afghans during the whole of the past millennia. Such groups were consistently successful over the years both in attack and defense against a wide variety of state-organized enemies, such as the British, the Soviets, the US, the Pakistanis, and before that the Sikhs and the rulers of India. That special skills were involved is clear. One can hardly doubt that being an effective barbarian took considerably more than a warlike disposition and a sincere desire to become rich.

Explanations of barbarian success when on the offense tend to focus on hardiness, mobility, and the militaristic attitudes bred by a nomadic way of life. These explanations are undoubtedly true in a limited way but do involve a certain circularity of reasoning. Of course the barbarians that win are hardy, mobile, and militaristic. So are the victorious armies of state-organized societies - those are simply the qualities of good troops everywhere (26). In most of the cases, the defensive successes of barbarians are often felt to be a simple matter of terrain. Many of the more notable barbarian strongholds - the Sulaiman Mountains, the Hindu Kush, the Zagros, Atlas, and the Alps - are daunting to even modern armies and must have seemed almost impregnable to their ancient counterparts.

Several other factors, other than geography and psychology, may help to explain barbarian successes. First, they enjoy a distinct advantage in military funding. Assembling an army is cheap for barbarians and expensive for states. Although war can indeed be self-supporting for any militarily successful polity, the front-end expenditures of a war conducted by a true state are bound to be relatively high. A barbarian war chief, by contrast, has none of these concerns. The initial expenses for him are minimal and the cost of maintaining his army nonexistent. If he is poor enough to start with, the profits from even a minor victory may be attractive enough to justify considerable risks.

Second, non-states have certain built-in organizational advantages when in the defensive role. A number of observers have pointed to the military effectiveness of the unilineal "segmentary" kinship systems of Pakistan’s western frontiers, which provide an automatic concentration of troops to match the size of attacking forces but have no vulnerable government center and no need for more than a

rudimentary command structure. Successful defense may require little more than a warlike population and a degree of xenophobia. Coordination among the defenders does not seem necessary or even desirable: most theorists of guerrilla and counterinsurgency warfare agree that self-sufficiency and capability for independent action on the part of small units are the hallmarks of success in defensive wars against numerically superior enemies.

One also should not undervalue a further advantage of societies without generals and kings: if there is no authoritative leadership, there is no one who can offer an authoritative surrender. It has been suggested, for instance, that this is the main reason for the comparative success of the British in pacifying Baluchistan as opposed to the North on the Pakistan-Afghan frontier. The Baluchi may have been no less resolute and skilled in war than the Pashtuns and the Hazaras, but they had leaders who could in some degree persuade their followers to abide by the agreements they had made.

On the other hand, the military advantages of acephalous organization are rather less evident when it comes to sustaining an offensive. Centralized organizations, all else being equal, can be presumed to have greater staying power: superior discipline, larger reserves of materiel, and greater ability to withstand tactical defeats in the name of strategic victory. Although barbarians could be expected to do well against states in raids or short wars within the territories of those states, the theoretical advantage might shift as campaigns drag on and the invaders begin quarreling or considering the advantages of taking their loot and going home.
Another institutional variable worth considering is that of the quasi-religious elite and military associations - the Dog Soldiers of the Plains Indians, the Jomsvikings of the Scandinavians, the *ribat* of North Africa, the Talibans in Afghanistan and its borders with Pakistan, and similar warlike cults of the Middle East - which are known to have served as the cadres or shock troops of nonstate armies. Cultist shock troops are prominent in the histories of some barbarian areas, as shown by the experiences of the American and British armies with Muslim "fanatics" in the southern Philippines and the Talibans and Al-Quaida on the North West Frontier of Pakistan.

In recent history of the Greater Indus Valley, it has been a common phenomenon that the warring tribes, in the event of a foreign enemy, asked a religious leader or a holy man to assume the leadership and confront the common enemy - be they the British, the Soviets, the American, or the Pakistan army. History of Swat and Waziristan is replete with such examples. Thus, religion has been a potent force in moving the barbarians into action, it is possible that on the borders of Bronze Ag civilizations it played the same role.

One should not assume, incidentally, that non-state armies are necessarily outnumbered by the armies of states. It may come as a surprise to learn that these archetypal individualists have not historically been averse to mass mobilization and large-unit military tactics. During the nineteenth century, virtually every tribe on the North West Frontier of Pakistan assembled at least one *lashkar* or raiding party of between five thousand and ten thousand men; some, like the indefatigable Afridi, did it several times. And there is no sign that raids of this size were anything out of the ordinary in the context of the long-term history of this region. The same history was repeated during the Soviet occupation, and later the American occupation of Afghanistan. Through social mechanisms that are not quite clear a number of the frontier tribes routinely fielded raiding parties that were equal in size to a Roman legion. When, as occasionally happened, several tribes formed an alliance, their combined forces were not inferior to the full armies of most known premodern states.

This is an exceptional case, to be sure. Yet it serves to give emphasis to the general point toward which the present arguments have been building: that barbarian military capabilities may in some circumstances be as formidable as to explain the fall of states without reference to those states' internal conditions. According to Bronson (26), the conventional wisdom is erroneous: the theoretical advantage of centralized over noncentralized polities is neither invariable nor insuperable. Given the right barbarians in sufficient numbers, it is plausible that even the bestorganized and least-senescent of states could be overthrown and incessant raids on its borderlands could sap the lifeblood of a civilization.

Keeping the theoretical considerations aside, altogether there are four possible causal roles that outsiders can play (26).

(I) They may be only vultures, scavengers that wait until their victim is thoroughly dead before starting to feed. In this case, their association with the death of civilized societies does not have causal meaning.

(II) They may be jackals, predatorscavengers that finish off the already weak or sick. Because the victim might have recovered if left alone, the causal status of outsiders of this kind is real but still secondary.

(III)They may be wolves predators that not only prey on weakness but that harry healthy victims until they become weak and get exhausted. Such wolfish outsiders must be counted as primary but not exclusive causes of political death.

(IV) The outsiders may be tigers, capable of bringing down the healthiest and strongest of prey without preliminary harrying. Where these exist, they are capable of causing the fall of a state without the assistance of other external or internal factors.

Barbarians are capable of filling any of these outside roles. The first, or vulture, role is not of interest from the standpoint of explaining sociopolitical disintegration of a civilization. The fourth, or tiger role, represented by the Mongols of Genghis Khan's period, is important but essentially uncomplicated in terms of the political processes involved. Although some early scholars put the Aryans in this role viz-a-viz the Harappan Civilization, at this time no one wants to buy this argument. The second and third roles are more complex, however, and require further discussion. We shall come to them a little later.

In context with the Indus Civilization and its demise, one should be able to show that (i) the attackers were really barbarians, that (ii) the attacked state had not been fatally weakened beforehand, and that (iii) the result was true social and political destruction, not just a change in government. Observers have long been puzzled by the paradox of an area that contains one of the world's great civilized traditions but whose political history is unusually short. After a moderately early but abortive start in the Indus Valley the material trappings of centralized polities came late to the region - it is not always realized that the first archaeologically recognizable, large post-Indus settlements are not earlier than the fifth century BC., or that the first substantial concentration of monuments and inscriptions is not much earlier than the time of Christ. Moreover, when solidly visible states do appear in sudden profusion in the late first millennium B.C., they lead curiously checkered careers. During the succeeding eighteen centuries, the entire Indus Valley produced no region-spanning state. Even the smaller states that emerged off and on lasted no longer than two or three centuries; the anarchical

interregna were everywhere prolonged and severe. Yet the region was highly civilized. It was creative, populous, and rich. It had been that way for three millennia. It should have produced large, durable empires to rival those of China, the Middle East, the Mediterranean, and Peru. But it did not, and the question is, why?

Aside from possible idiosyncrasies of regional psychology, one of the few obvious differences between all Indus states and most states elsewhere is the fact that all were within raiding range of unusually effective barbarians. But in few other parts of the world have barbarian raids been as unremitting and as spectacularly successful. From the days of Alexander the Great down to the mid-eighteenth-century blitzkrieg of Nadir Shah, attacks by outsiders, sometimes organized as states themselves but invariably making heavy use of tribal soldiers, are a normal state of affairs. With the exception of an apparent intermission between A.D.750 and1000, not a century passes without a great raid that goes at least as far as the Ganges and probably not a decade when barbarians do not repeatedly cross the Indus. And it is noteworthy that the armies and often the leaders of these outside attackers are usually from one area, the North West Frontier. The peoples of the adjoining areas, across the Indus, such as those of the hilly areas of Pothwar, sometimes resisted the invaders but more often joined them in raiding the richer areas further east.

This extraordinary situation is without parallel in the history of other regions: it is as if the fall of the western Roman empire had been prolonged indefinitely, with an endless supply of Attilas, Theodorics, and Stilichos, but with very few Charlemagne and not even the possibility of a Belisarius or Justinian (26). This analogy may be overstretched. But the Indus data do at least indicate that we must be cautious about accepting the European-Middle Eastern-Chinese pattern of short dark ages and long imperial periods as normal. Cultural and political success do not always go together. In ancient Pakistan, for all its cultural enlightenment, the barbarian-dominated dark ages are the political norm and the stable states the rare exceptions.

The implications for the present argument seem clear. Although historical documents pertaining to the Indus Valley are not detailed enough for one to prove that barbarians in any single case were solely responsible for the fall of a local state, the larger picture is such that one cannot doubt that barbarians were decisive causes of numerous events of this kind. Over the last two millennia many stable communities in Pakistan must have fallen for reasons that has nothing to do with internal problems. As with kingdoms lying in the path of the Mongols, a contented citizenry and competent government was no guarantee of survival for a smallish state in the Indus Valley faced with yet another incursion from the West. Diplomacy must often have been the only skill that counted on such occasions; other functions of organized society were entirely irrelevant.

None of the foregoing should be taken as a claim that most falls of civilizations and states are caused primarily by barbarians. They are in second place even among the external causes. Essentially internal factors must often have been decisively important: as suggested earlier, the normal instabilities of any social organization seem capable of sometimes become amplified to such a degree that they tear the system apart. The hostile outsiders who are almost certainly present during any sociopolitical dissolution could in the case of an internally caused decline be no more than spectators or minor participants. On the other hand, they could be the main cause or the symptoms of decline and destruction.

Coming back to the analogy of jackals and wolfs in the Indus context, a central problem is that of

telling them apart, since barbarians of both classes can be expected to have made decades or centuries of probing attacks before the coup de grace is finally administered. The wolf scenario is a familiar one: constant probing, constant harrying, opportunistic biting and decapitating, and finally feeding on the physically exhausted victim. Unfortunately, a jackal scenario could look quite similar: the only difference is that the activities of the jackals are not a determining cause of later events. The victim is already weakened or sick; the jackal only robs it the opportunity to recover.

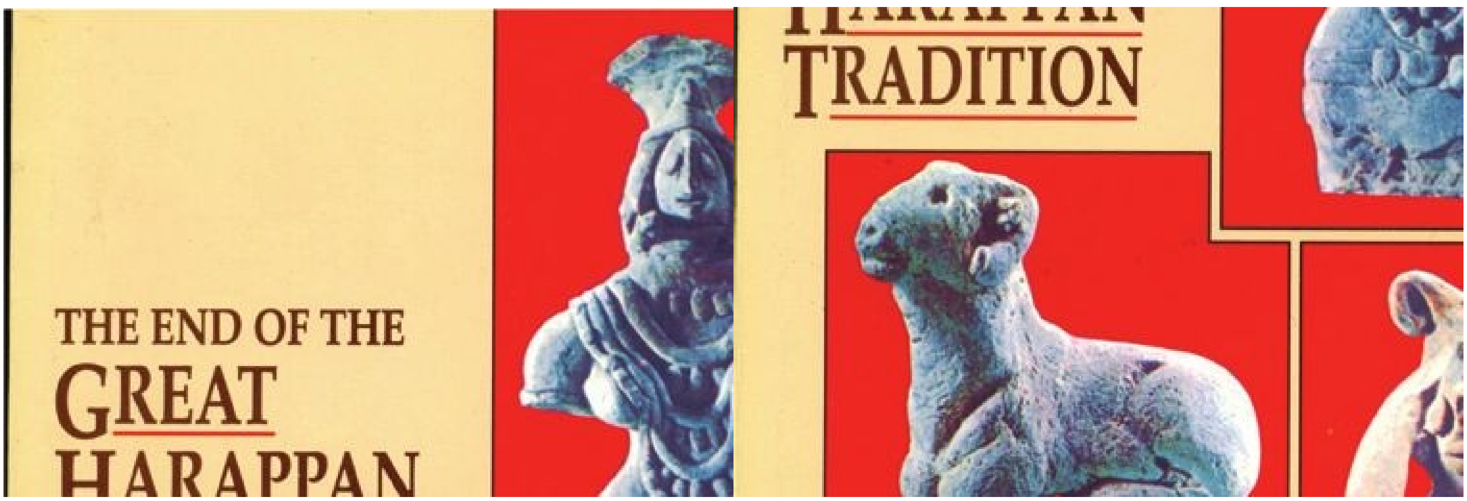
Now, where the Harappan Civilization fit in this scenario? Since there is no written records, our only source of information comes from the extrapolations of the Aryans' raids as depicted in the RgVeda, an event that postdates the collapse of the Indus Civilization. The picture that emerges is a mixture of wolf and jackal strategies: sometime destroying the agricultural base of the Indus agriculture by destroying their water dams, sometimes burning their settlements with the help of their god *Agni* (the fire), sometimes simply stealing their cows, and sometimes just extorting them with the threat of violence; the disorganized and weak Indus people, in turn, sometimes giving the raiders some ineffective resistance, sometimes hiding away their wealth, i.e. the cattle, sometimes running away for their life, sometimes agreeing to pay ransom to the invaders' chief, sometimes bribing the Aryan's bards and messengers, and occasionally agreeing to be their servants. A similar drama must have been played during the earlier raids by different sets of barbarians in the final stages of the Harappan Civilization. It is possible that wolf tribes softened the enemy; when they had their full, the jackal could have come in to finish the job.

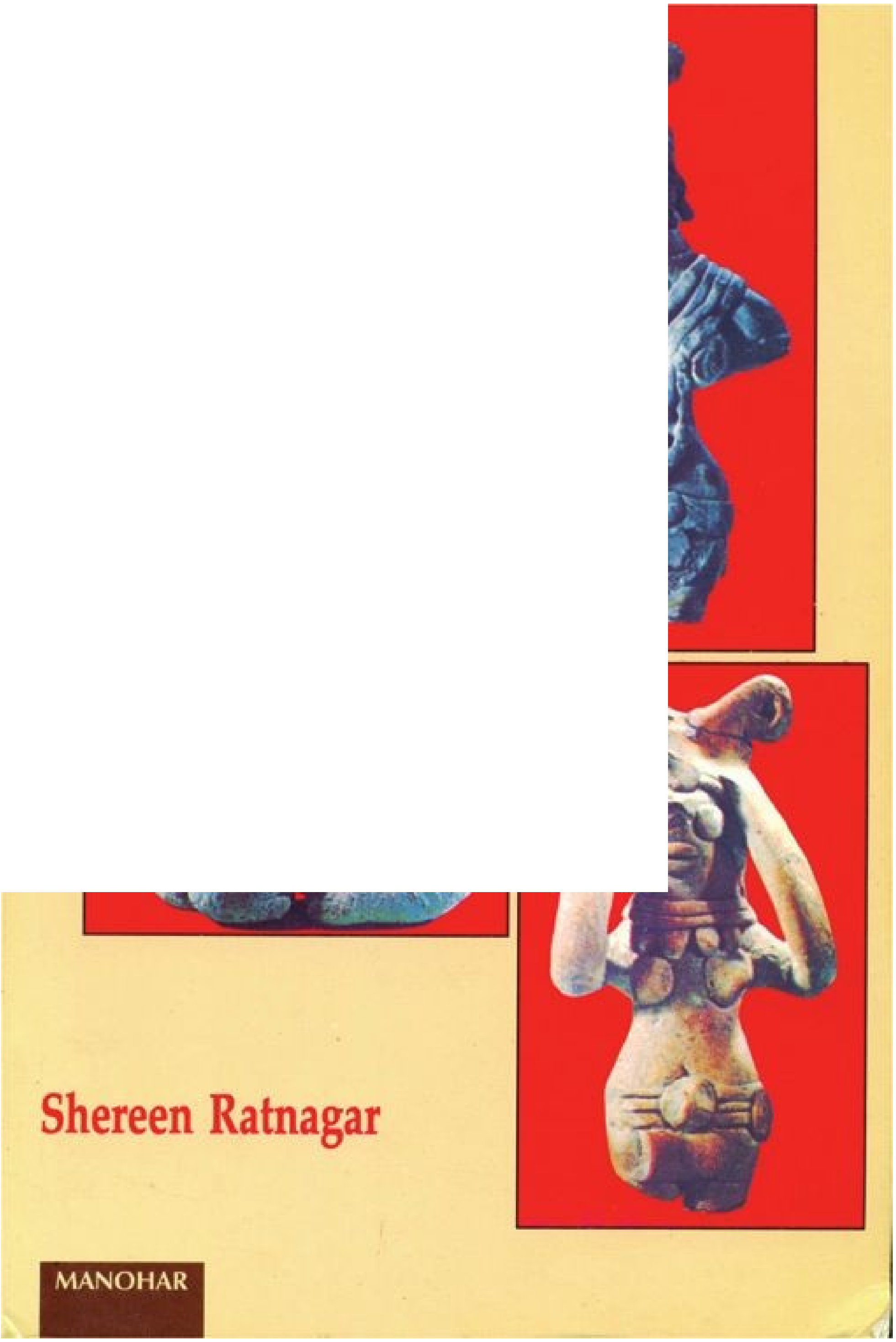
Who were these intruders? The hunch is that they were primarily the hill peoples from the west of the Indus River and the victims were primarily the peoples of the Indus plains. As stated earlier, in historic times, there were numerous such raids, some initiated at long distances in Central Asia, some originating close-by in Afghanistan. Sometimes they stopped at the River, sometimes they crossed it and reached as far as the Sutlej and Beas. Once in a while they even reached the Ganga-Jamuna plains. Invariably, some of these intruders settled in the Indus Valley and eventually became an integral part of the settled population of Pakistan. In other instances, the people of the outlying regions of the rich, settled areas of the plains became the hanger-ons to the invaders and participated in the pillage and loot. Again, the hunch is that earlier, prehistoric 'invasions' and raids were also of this nature. The objective of the later raids was pillage, rounding off the cattle, and looting the agricultural products; this would have been the objective of the raids at the tail end of the Indus Civilization also.

The continuous but punctuated stream of intrusions into the Indus Valley from the West is not in dispute. The question is whether these intrusions were peaceful migrations or outright invasions. Looking at historic examples, it would be unrealistic to conclude that barbarian conquests were painless as a general rule. The arable land with irrigation water was limited and pastures were confined only to certain areas. The existing users would not have given up these resources without resistance, the incoming barbarian groups must have fought to snatch them. The mere fact that these outsiders were admirers of a civilization does not make them preservers of the polities that supported that civilization, nor did extensive prior contact with a state mean that they had the vaguest notion of how it ran. As shown by the behavior of the Mongols in their early campaigns, barbarians may be quite uninterested in previous institutions or in preserving the previous culture and population. And, as shown by Theodoric's Ostrogoths and the various other invaders of Rome, a lack of administrative talent and/or will is to be expected in even the most ardently admiring of barbarian conquerors. This by itself is enough to explain the close empirical association between conquests by barbarians and the falls of civilization and states (26).

Archaeological evidence for barbarians’ intrusion during the final stages of the Harappan Civilization is hard to come by; nomadic pastoralists and passing-by invaders do not leave behind much evidence. However, archaeologists have indicated a few stray objects that seem alien in style: copper shaft-hole axe-adze of Iranian or Central Asian design and several daggers with midribs and holes where they had been riveted to metal handles, at Mohenjo-daro; similar objects from Chanhu-daro and Jhukar, including shaft hole axes, copper pins with decorated heads, and round or occasionally square compartmented

stamp seals bearing geometric designs; a buffware pottery that is different from the Harappan style; and objects of Iranian and Central Asian affinity at Pirak and Sibri, can be cited as examples in the Lower Sidh. At Harappa is detected the arrival of new peoples, the Cemetery H being one evidence. Additionally, Gomal Grave culture in the Gomal Valley and Pothwar, as well as the Gandhara Grave culture in Swat Valley is taken as alien cultures in the Indus Valley. The exact chronology has not been worked out but it is believed that these intrusions could have stemmed from the time period of the Harappan devolution or just after the final stages of the Civilization, ranging from 1700-2000 BC.





Ratnagar has attempted to consolidate the available archaeological information on the emergence of new cultural elements on the western peripheries of the Indus Valley. She says (27):
“The bronze cosmetic flagon known at Hissar, Altyndepe and in Bactria, also occurs at Chanhudaro as a beautifully fluted

piece, in a probable Jhukar context. Round bronze mirrors with tangs for fitting into wooden handles, as at Hissar, Altyn-depe, Gonur I, Sapalli, Dashly, Shahdad and Khinaman and Mehi - some of them with a handle shaped as a human body - also occur at Harappa, Mohenjodaro, and Kulli sites.Twelve such mirrors occurred in graves at Harappa and one in a Kalibangan grave. Rissman has remarked that in Harappan graves it was mirrors rather than any other bronze item that tended to be deposited and that only one such mirror occurs in a Harappan hoarded treasure.

“ The beautifully cast socketed adze-axe of Gonur I has counterparts at Hissar, Shahdad, Khinaman

and Mohenjodaro. Harappa and Chanhudaro each have a single bladed socketed axe. Exquisite bronze animal-headed pins or "wands" at Dashly and Hissar have a counterpart in the latest stratum of Harappa in an "antimony stopper rod" (*surmadani*) surmounted by the figure of a dog biting the ear of a goat; and at Mohenjodaro where a rod is surmounted by an antelope. There are also compartmented seals whose faces bear raised geometric designs, from Mohenjodaro and the white steatite stepped seal with a stylized eagle from Harappa has Bactrian connections." (27).

"The purpose here is not to elaborate on a list of similarities between the regions, for such an exercise often tends to neglect context and cooccurrence and simplistic conclusions are drawn about "trade" or "migrations". The point is, instead, to highlight the relevance of the happenings in this region to the Harappan centers and suggest that there may be some inter-connexion between the series of Harappan settlement desertions and colonizations and events in the western region" (27).

The Kachi plain, on the frontier between the Indus Valley and Baluchistan, was also affected by group movements. Western contacts reappear at Nausharo after the Harappan period. The famous Neolithic site of Mehrgarh has a south Cemetery with ordinary graves: "cenotaphs" devoid of human remains but with offerings and grave goods interred in pits. At this cemetery grave goods of international currency include steatite kidney-shaped containers (as in Bactria), a stone sceptre as in sites of the BMAC and eastern Iran, a bronze cosmetic flagon, mirror and pins with double volutes or bird-shaped heads.

Also in the Kachi, near Nausharo, was a small (1 ha) and short-lived settlement, Sibri. This could have been the settlement of a small group of migrants who came down the Bolan Pass from Central Asia. Among the finds occur a polished stone column, two flat, violin-shaped figurines, compartmented seals, a bronze ornamental pin and a bronze shaft-hole axe-adze. There is also evidence of copper/bronze industry at the site, which is comparatively rich in metal. Critically important is the fact That Sibri offers not only Central Asian elements but also Harappan ceramic traits and Indus characters on an amulet, so that the chronological coincidence between the later phase of the Harappan civilization and the momentous happenings to its west are established.

At Pirak, 11 km south of Sibi on a tributary of the Bolan, a 9-ha settlement was founded around 1700 BC. The material culture - house forms, hearths, pottery, bone and stone tools and grain storage methods-presents a contrast to the Harappan material culture. Moreover, at Pirak the horse and the two-humped Bactrian camel (probably domesticated, centuries earlier in Turkmenia) are represented by their bones. Among artifacts there are Murghab type stone seals. (27).

Where movements of groups from eastern Iran-Central Asia are concerned, northernmost Pakistan also becomes relevant. From about 1700 BC, cemeteries and villages in Swat (period IV) had a material culture which seems to have been a curious amalgam of elements from Pakistan (painted pottery), northeast Iran (grey burnished pottery, violin-shaped figurines, the horse) and China (jade pendants, stone harvesters and ornate bone pins; Swat, too, would be receiving steppe elements from. Not only were there movements of groups of people, social transformation was also involved.

Although this evidence is often offered as an indication of the population intrusions from the West, it is not clear if the finds of Iranian and Central Asian objects and the ways of the burial of the dead really stem from the population movement into the Indus Valley or it was the result of normal cultural interaction of the peoples of the Indus Valley with the residents of the world around them. It is also not clear if these migrations were 'peaceful', filling in the areas that were vacated by the Harappans, or

they were the result of barbarian's raids. The better possibility is that they were the results of pre-Vedic raids.

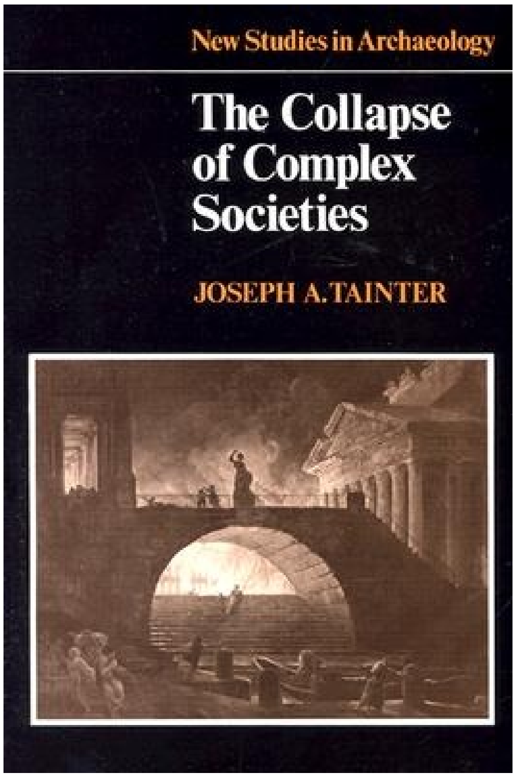
ECONOMIC FACTORS

Economic factors are intertwined with almost all proposed reasons for societal collapse but its clear annunciation comes from Joseph Tainter in his *The Collapse of Complex Societies* first published in 1988. He develops a farreaching theory that accounts for collapse among diverse kinds of societies, especially states. Tainter's thesis is based on the principle of diminishing return. The return on investment in complexity varies and this variation follows a characteristic curve. It is proposed that in many crucial spheres, continued investment in sociopolitical complexity reaches a point where the benefits for such investment begins to decline, at first gradually, then with accelerated speed. With declining marginal returns marginal costs rise. Thus, complexity as a strategy becomes increasingly costly and ultimately causes it to unravel without control. Collapse is this sudden loss of social complexity, stratification, internal and external communication and exchange, and productivity. Tainter introduces four concepts that can lead to an understanding of why complex societies collapse. These concepts are:
1.human societies are problem-solving organizations;

2.sociopolitical systems require energy (cost) for their maintenance;
3.increased complexity carries with it increased costs per capita; and
4.investment in sociopolitical complexity as a problem-solving response often reaches a point of declining marginal returns.
With these facts in mind, collapse can simply be understood as a loss of the energy needed to maintain social complexity.
Sociopolitical organizations constantly encounter problems that require increased investment merely to preserve the status quo. This investment comes in such forms as increasing size of bureaucracies, increasing specialization of bureaucracies, cumulative organizational solutions, increasing costs of legitimizing activities, and increasing costs of internal control and external defense. All of these must be borne by levying greater costs on the support population, often to no increased advantage. As the number and costliness of organizational investments increases, the proportion of a society's budget available for investment in future economic growth must decline.
Thus, while initial investment by a society in growing complexity may be a rational solution to perceived needs, that happy state of affairs cannot last. As the least costly extractive, economic, and organizational solutions are progressively exhausted, any further need for increased complexity must be met by more costly responses. As the cost of organizational solutions grows, the point is reached at which continued investment in complexity does not give a proportionate yield, and the marginal return begins to decline. The added benefits per unit of investment start to drop. Ever greater increments of investment yield ever smaller increments of return.
A society that has reached this point cannot simply rest on its accomplishments, that is, attempt to maintain its marginal return at the status quo, without further deterioration. Complexity is a problemsolving strategy. As stresses necessarily arise, new organizational and economic solutions must be developed, typically at increasing cost and declining marginal return. The marginal return on investment in complexity accordingly deteriorates, at first gradually, then with accelerated force. At this point, a complex society reaches the phase where it becomes increasingly vulnerable to collapse.
Two general factors can make such a society liable to collapse. First, as the marginal return on investment in complexity declines, a society invests ever more heavily in a strategy that yields

proportionately less. Excess productive capacity and accumulated surpluses may be allocated to current operating needs. When major stress surges (flood, drought, encroachments by nomads on the peripheries of the civilization) arise there is little or no reserve with which they may be countered. Stress surges must be dealt without of the current operating budget. This often proves ineffectual. Where it does not, the society may be economically weakened and made more vulnerable to the next crisis.

Once a complex society enters the stage of declining marginal returns, collapse becomes a mathematical likelihood, requiring little more than sufficient passage of time to make probable an insurmountable calamity. So if Rome had not been toppled by Germanic tribes, it would have



been later by Arabs or Mongols or Turks. A calamity that proves disastrous to an older, established society might have been survivable when the marginal return on investment in complexity was growing. Rome, again an excellent example, was thus able to withstand major military disasters during the Hannibalic war (late third century B.C.), but was grievously weakened by losses that were comparatively less (in regard to the size and wealth of the Roman state at these respective times) at the Battle of Hadrianople in 378 A.D. Similarly, the disastrous barbarian invasions of the first decade of the fifth century were actually smaller than those defeated by Claudius and Probus in the late third century.

Secondly, declining marginal returns make complexity an overall less attractive strategy, so that parts of a society perceive increasing advantage to a policy of separation or disintegration. When the marginal cost of investment in complexity becomes noticeably too high, various segments increase passive or active resistance, or overtly attempt to break away. The insurrections of the Bagaudae in late Roman Gaul are a case in point. In extreme cases, the populace can even migrate to other areas, as it probably happened in the declining period of the Harappan Civilization. At some point along the declining portion of a marginal return curve, a society reaches a state where the benefits available for a level of investment are no higher than those available for some lower level. Complexity at such a point is decidedly disadvantageous, and the society is in serious danger of collapse from decomposition or external threat.

The theory of Marginal Returns has been applied to explain three best-known instances of collapse:

the Western Roman Empire, the Southern Lowland Maya, and the Chicanos, and has yielded positive results. Although this theory is meant as a “universal” theory for explaining state and civilizational collapse, in practical terms it is more applicable to the collapse of centrally organized states than civilizations in general. It would be an act of faith to apply these concepts to explain the collapse of a non-state civilization, as the Harappan Civilization probably was.

CHANGE IN ENVIRONMENT

Two major explanations for the depletion of vital resources are subsumed under this theme: a gradual degradation of environment due to human mismanagement, or a more rapid loss of resources due to permanent climatic shift. Both are thought to cause collapse through depletion of the resources on which a complex society depends.

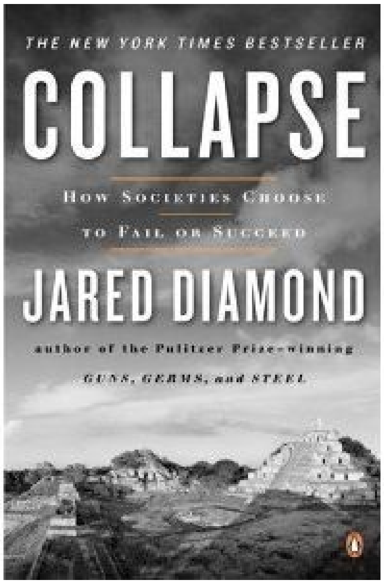
Ecological Degradation (wearing off the Landscape and Deforestation): According to some opinions, such as that of Fairservis (30), the delicate ecological balance of the Indus Valley was being disturbed because the human and cattle population in these areas was fast depleting the scanty forests, food and fuel resources. The combined needs of the Harappan townsmen, peasants and pastoralists exceeded the limited production capacities of these areas. Thus, a growing population of men and animals confronted by scanty resources wore out the landscape.

With the forests and grass cover gradually disappearing, there were more floods and droughts. This depletion of the subsistence base caused strain on the entire economy of the civilization. That is why the Harappan communities started moving towards the eastern areas, away from the core area of the Indus Civilization. This process of decline was completed by the raids and attacks of the bar barians of the West on the surrounding communities.

The arguments of
ecological degradation caused by humans as a primary cause of collapse in many early societies are quite prevalent. They have gained particular strength after the publication of Jared Diamods’s extremely popular book *Collapse: How Societies Choose to Fail or Succeed. Diamond* suggested five major reasons for the collapse of 41 studied cultures: environmental damage, such as deforestation and soil erosion; climate change; dependence upon longdistance trade for needed resources; increasing levels of internal and external violence, such as war or invasion; and societal responses to internal and environmental problems. Among them the ecological degradation caused by man makes at the top of the list. In the same vein, Jeffrey A. McNeely, in his writings has suggested that past civilizations have tended to over-exploit their forests, and that such abuse of important resources has been a significant factor in the decline of ancient societies.

The arguments and the evidence offered by Jared Diamond and Jeffrey McNeely are hard to counter but their application to flood-irrigated soils such as that of the Indus plains and southern Mesopotamia is somewhat problematic. The enduring fertility of soils of the Indus Valley over the subsequent millennia disproves the hypothesis of soil exhaustion in the Indus Valley. Also, the computation of the needs of the Harappan population is based on scanty information and a lot more information would be needed to make a realistic evaluation of the subsistence needs of the Harappans.

The issue is an important one and attracted this comment by Mortimer Wheeler:



“Impoverishment of the surrounding farmlands by over-cultivation, by the destruction or neglect of irrigation-channels, by overgrazing, has been postulated. The untiring consumption of major vegetation implied by the firing, age after age, of millions of bricks may, even with the aid of hill-



timbers, have helped to bare the land and may possibly, to some small extent, have reduced the transpiration of moisture . . . Mohenjo-daro was steadily wearing out its landscape” (78).

Similarly, Vishnu-Mittre raised the question of the overuse and mismanagement of natural resources. (79). An expansive analysis of a possible disequilibrium between urban demand and the carrying capacity of land has, however, only been offered by Walter A. Fairservis Jr. (80). Basing his views upon modern census data on Sind, Fairservis highlighted several factors: the possibility of a

reduction in the food surplus leading to a population movement away from the Indus Valley; the effect of an enormous fodder requirement on the surrounding grasslands and forests; and the drain on the latter by humans producing vast quantities of fired bricks. He regarded these as being crucial in creating a precarious economic situation which, in turn, contributed to the collapse of the Harappan civilization. A careful reading of this paper will reveal, though, that the arguments are more conjectural than archaeological.

In view of these objections, George Dales aptly noted that "wearing out a landscape is basically impossible to prove. And no alluvial plain wears out, anyway". Also, "if environmental factors created by man had been decisive in the downfall of civilizations, Mesopotamia would have been deserted long ago". In other words, the Harappans themselves could not have been able to change their environmental setting to such an extent as to have any bearing on their ability to sustain themselves.

Climate Change: Climate change has always been the most favored cause of the collapse of early civilizations although as a general theory the change in environmental ecology has been often couched in a combination of social, political, and economic factors. That perspective is now being fine-tuned with the accumulation of high-resolution paleoclimatic data that provide an independent measure of the timing, amplitude, and duration of past climate events. Some of these climatic events were abrupt, involved new conditions that were unfamiliar to the inhabitants of the time, and persisted for decades to centuries. They were therefore highly disruptive, leading to societal collapse - an adaptive response to otherwise insurmountable stresses (81). Some of the events were gradual and imperceptible but they lasted for a long time without reprieve. Several examples from the Old World illustrate that prehistoric and early historic societies - from villages to states or empires - were highly vulnerable to climatic disturbances. Many lines of evidence now point to climate as the primary agent in repeated social collapse.

High-resolution archaeological records from the New World point to abrupt climatic change as the proximal cause of repeated social collapse. In northern coastal Peru, the Moche civilization suffered a 30-year drought in the late 6th century A.D., accompanied by severe flooding. The capital city was destroyed, fields and irrigation systems were swept away, and widespread famines ensued. The capital city was subse



quently moved northward, and new adaptive agricultural and architectural technologies were

implemented. Four hundred years later, the agricultural base of the Tiwanaku civilization of the central Andes collapsed as a result of a prolonged drought documented in ice and in lake sediment cores. The lake sediment cores show that the Classic Maya collapse of the 9th century A.D. coincided with the most severe and prolonged drought of that millennium. In North America, Anasazi agriculture could not sustain three decades of exceptional drought and reduced temperatures in the 13th century A.D., resulting in forced regional abandonment.

Environmental factors have also been frequently suggested to play a decisive role in the decline and fall of the Harappan Civilization (31,32); among these, regional aridification (a decrease in rainfall) and hydrological changes such as the drying of the GhaggarHakra system (33,34) have been the most prominent. It has been hypothesized that there was an increase in the arid conditions in the Indus Valley by the end of the third millennium B.C. In semiarid regions like the greater Indus Valley, even a minor reduction in moisture and water availability could spell disaster. It affected agricultural production which in turn put the city economies under stress. This is by far the most appealing explanation for the decline of the Harappan Civilization and for its eventual demise. Let us review the work done so far and indicate a most plausible climate-based thesis recently offered for the collapse of the Harappan Civilization.

First of all, a link between climate and resource depletion is well-established and it is not unique to the rise and fall of the Harappan Civilization. This relationship has been intuitively evoked for several other civilizations. A rigorous treatment of the subject is, however, recent. This interest in the linkage between climate and rise and fall of civilization owes much to the work of Ellsworth Huntington (35,36), and to more recent theorists such as Winkless and Browning (37), J. Hughes (38), and Butzer (39,40,41). Huntington argued (35) that civilization is affected by climate, that many of the great nations of the past rose and fell with favorable and unfavorable climatic conditions. “During times of favorable climate in countries such as Egypt and Greece the people were apparently filled with a virile energy, which they do not now possess” (35). With aridity in Greece there came economic distress, famine, and lawlessness. To Huntington, high frequencies of cyclonic storms 'energized' populations to create civilizations, and when a climate became unfit, no people could retain the energy and 'progressiveness' that he believed was necessary for civilization (35). The fall of Rome was explained by adverse climatic conditions after the early third century A.D. (36).

Winkless and Browning provide an updated climatic theory, but with a curious reversal of some of Huntington's reasoning. To them, changing physical factors (e.g., increased volcanism) lead to changing climates, which lead to changing food supplies, and thus to changing human behavior (wars, migrations, economic upheavals, changing ethics, etc.) (37). Whereas Huntington saw civilizations flourishing in stimulating climates, Winkless and Browning ascribe civilization to benign climatic conditions, and collapse conversely. They suggest that when climate changes, marginal areas are affected first. Buffer states begin to abandon the characteristics of civilization, return to nomadism and raiding, and ultimately topple the weakened centers of power. These authors further postulate an 800 year climatically-induced cycle to human affairs, superimposed on shorter cyclic patterns (37).

Coming to the Harappan Civilization, it has been intuitively assumed that in the hey days of the Harappan Civilization the environment was favorable but eventually turned a wrong turn, causing the subsistence economy of the Harappan society to crumble. Harappan archaeology has many instances of animals being found where we would least expect them. One of the latest is the discovery of bones

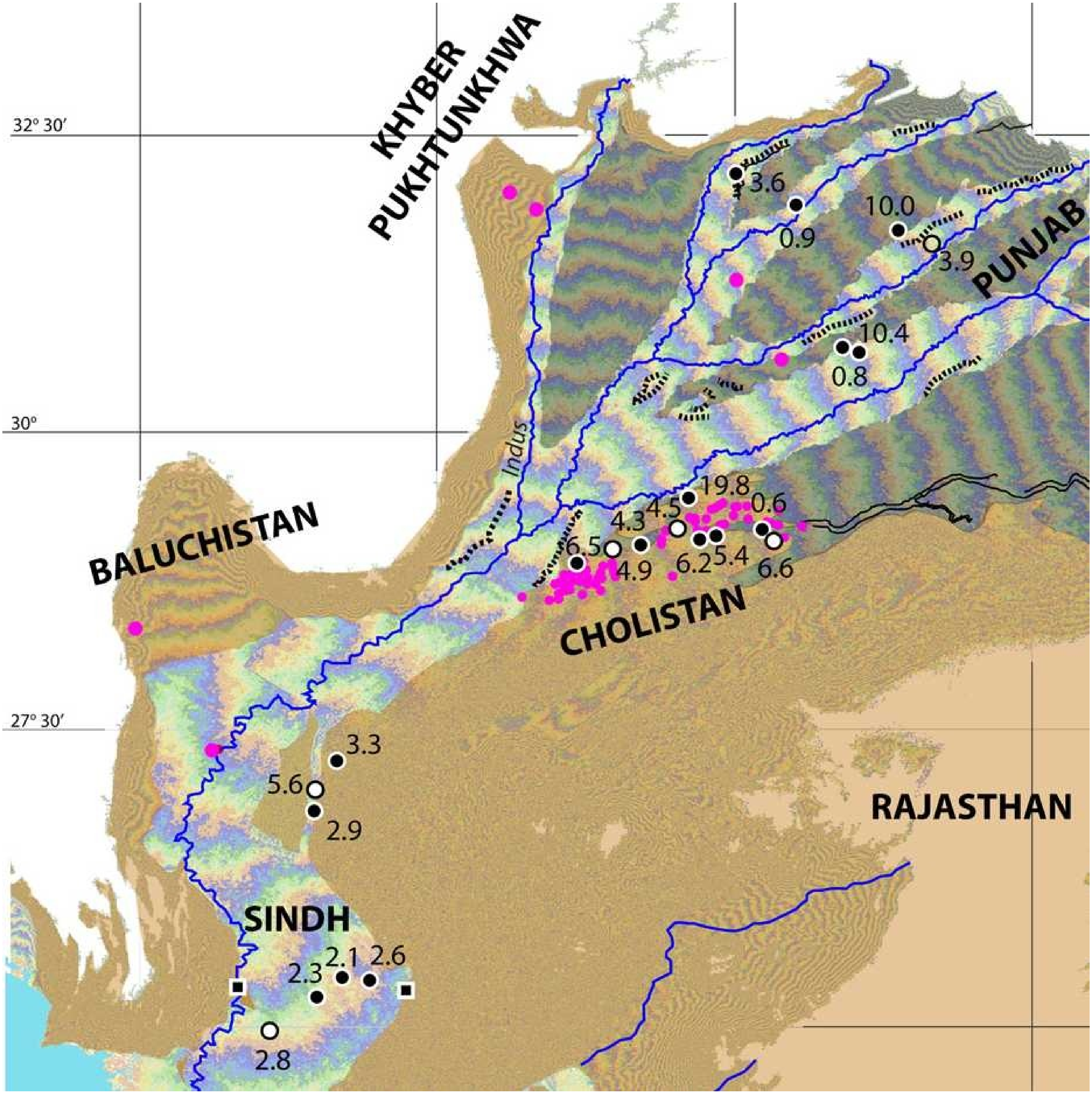
of the rhinoceros in a hollow near a large Harappan-period brick structure at Nausharo (82) in the arid Kachi plain.

A number of scholars have discussed the problem of climatic changes in the greater Indus Valley during the third and second millennium BC. Hypotheses have been offered which link the "wetter' climate to the rise of the Harappan Civilization and the "dryer" climate to its demise.

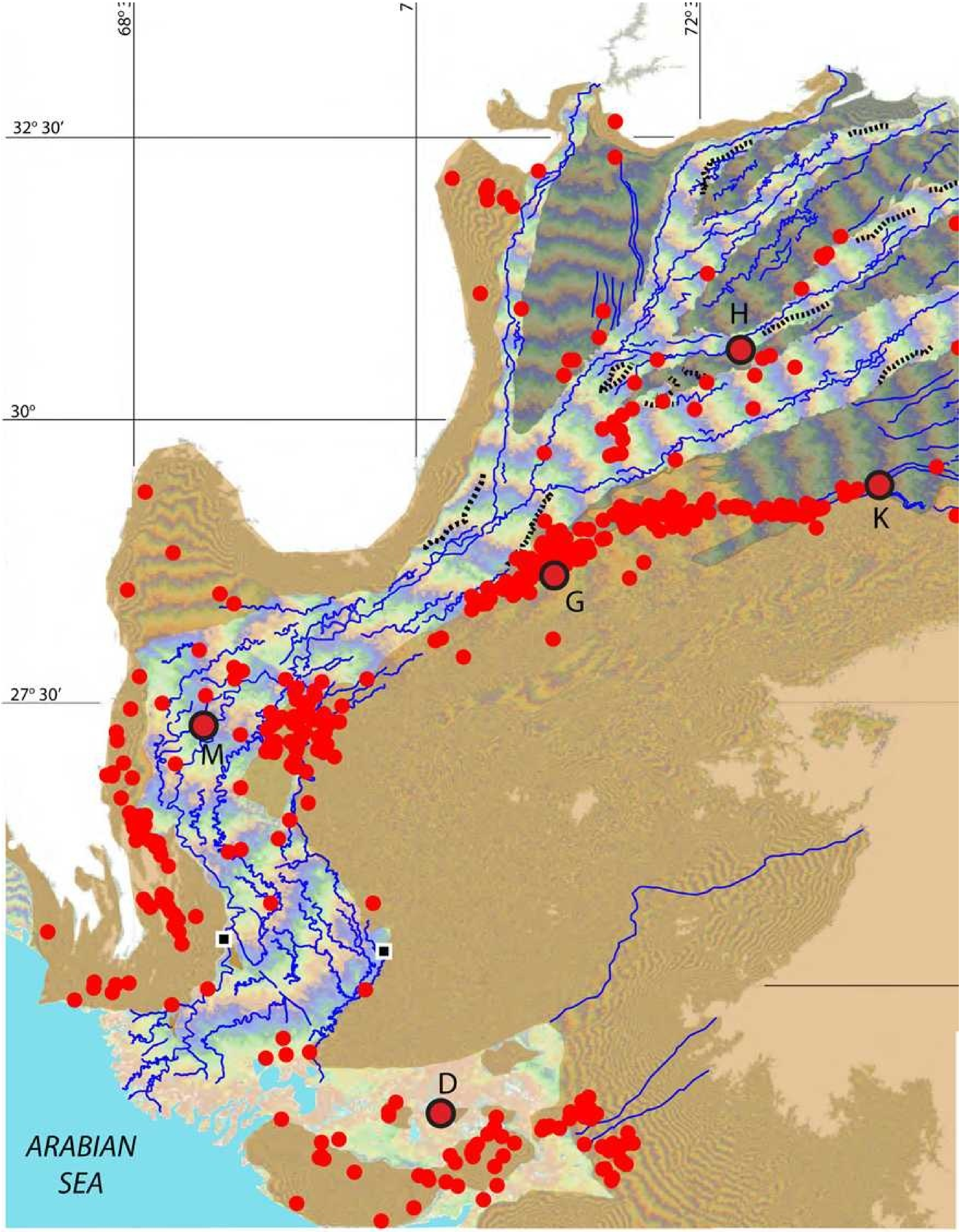
On the basis of pollen identifications from twenty-two dated lake sediments in Rajasthan (83,84) it has been suggested that there was substantially higher rainfall - monsoon as well as winter rainfall - between 3000 and 1800 BC, indicated by the pollen moisture-dependent vegetation. The pollen frequencies, it was inferred, indicate that after the Harappan period there followed a period of marked aridity.

Singh's conclusion, however, came under attack from several different sources. For example, Possehl wrote: **"**The changing salinity of these lakes, which appears to be well documented, need not be due to changes in rainfall. The geology and environment of Rajasthan are coupled. The three lakes investigated are hypersaline today, but there are also freshwater lakes in this same region (Lakes Pushkar and Ganger). This observation leads to the conclusion that, under one climatic regime in Rajasthan, there can be both freshwater and hypersaline lakes, calling into question the Singh hypothesis". And, "Site counts go up from 218 during the Mature Harappan to 853 in Post-urban times, Although there was a dramatic drop in average site size, down from 13.54 to 3.55 ha, the estimated total settled area remained remarkably stable for both periods. These data do not look like those that one would expect if there had been a severe reduction in rainfall as Singh proposed, especially given the fact that it is a dry cropping region" (49).

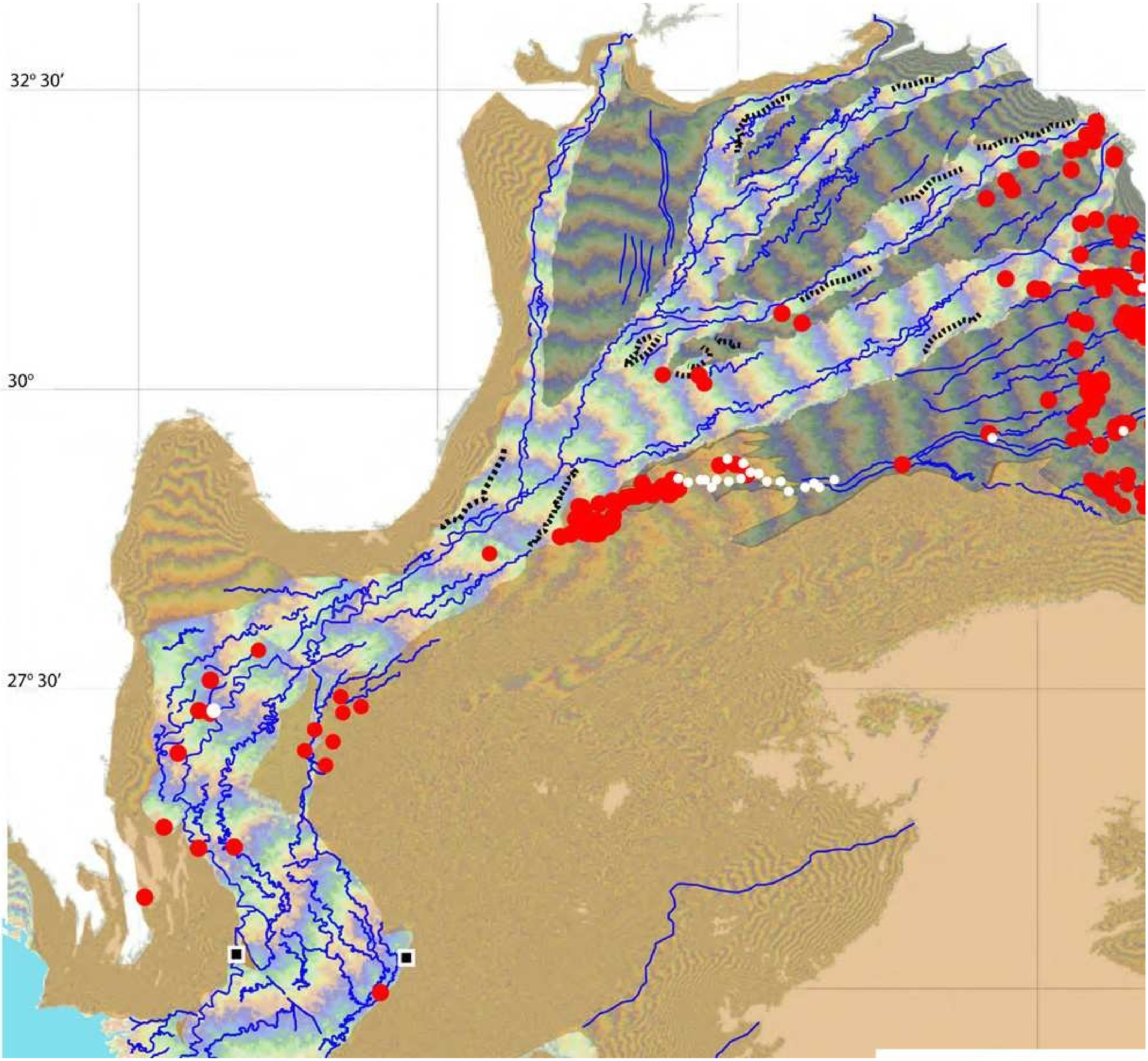
Some other archaeologists also weighed in. For instance, Misra concluded: "In sum, the enormous volume of archaeological evidence now available from northwest India [Pakistan] completely fails to sustain the overall hypothesis proposed by Gurdip Singh that fluctuations in rainfall played a decisive role in the emergence, diffusion, prosperity and decline of farming-based cultures in the region. The only role the increased rainfall played was to arrest the hyperaridity of the Upper Pleistocene, stabilize the sand dunes, accelerate the growth of vegetation and help in the emergence and spread of a nomadic huntinggathering-pastoral economy. This pattern of life has persisted in the semiarid and arid environments to this day" (50).



KHYBER PUKHTUNKHWA
32° 30′
30°
27° 30′
PUNJAB
BALUCHISTAN
CHOLISTAN
SINDH
RAJASTHAN
Indus
3.6
0.9
10.0
3.9
10.4
0.8
19.8
4.5
4.3
0.6
6.5
4.9
6.2
5.4
6.6
3.3
5.6
2.9
2.1
2.6
2.3
2.8



68°
7
72°
32° 30′
30°
27° 30′
H
K
G
M
D
ARABIAN
SEA



Chronological changes in settlement density in the Indus Valley:
Top: Pre-Harappan Neolithic Settlements Middle: Early and Mature Harappan Communities
Bottom: Late Harappan villages (*Giosan et al*)

The results of Gurdip Singh and associates are confusing, to say the least. The fault probably lies on the interrelation between the rainfall and the agricultural production - more rain, more production and more settlements; less rain, less prosperity, less population - rather than on the reliability of data. The fact is that for the arid Indus region, river floods have always been far more important and reliable for agriculture than rainfall, as during the Harappan era (44,45) inundation agriculture during the Rabi season (winter crops) was dominant along the Indus and its tributaries (51).

Among the problems associated with this argument are: 1) the fact that the later studies did not confirm the Gurdip Singh findings, some in fact contradicted them; 2) the fact that the evidence of

pollen is not a direct measure of past rainfall change: this can only suggest that changes occurred; 3) the fact that Gurdip Singh identified pollen and charcoal of cereal plants (indicating disturbance of the natural vegetation cover) for the period 7000 BC onwards when systematic surveys conducted in Rajasthan indicate that no agricultural site existed in the region - not even one buried under sand dunes (50); the fact that rainfall fluctuations are not so precisely dated that we can state with confidence that a dry period occurred in precisely the lasts centuryt/ decade of the Harappan period and we do not always know the timing between climate change and vegetation change; and that what counts is theeffect of a fall in precipitation. If precipitation fell, the effect would be more marked in Sindh, which has only 20 cm or less per annum in rainwhich has only 20 cm or less per annum in rain 70 cm rainfall in the near.

Even if an increased acidification due to a decrease in the monsoons is admitted to, the problems still remains how did it affect the agricultural production of the region. We know that the Indus agriculture did *not* depend on the monsoons; wheat and barley are winter crops and the monsoons are relevant largely to the summer crops.

During the same period, other climate studies were being undertaken and they substantially yielded more-or-less similar data (31,52). For example, hydroclimate reconstructions for South and Central Asia showed that precipitation from both monsoon and westerly sources that feed rivers of the Indus Plain (45) decreased since approximately 2,500-3,000 BC, and was at its lowest after approximately 2,000 years BC. However, the interpretations were different. It was hypothesized that the increasing aridity, recorded at the start of the aridification process in South Asia around 2500-3000 BC, had affected the total Indus discharge. It diminished the intensity of floods and allowed inundation agriculture to expand along the Indus and its tributaries (45). Further drying was, however, detrimental for the Harappans,

AL M E-2.0
-1.0
0.0
B wetter
drier
C Sindh Nara confluence Punjab valleys Punjab doabs lower G-H upper G-H
0 2 4 6 8 10 12 Age (kyr)

Palaeo-hydroclimate reconstructions and sedimentary activity chronology for the Harappan domain. (A)Monsoon precipitation reconstruction.
(B)Synthetic reconstructions for the Indian monsoon domain (black) and westerly precipitation (gray). (C)Sedimentation ages for fluvial forms in: Sindh; Nara Valley; Indus- Panjnad-Ghaggar-Hakra confluence;

Punjab incised valleys; Punjab inter-fluves (doabs); and the lower and upper Ghaggar-Hakra (G-H) system regions, respectively. OSL dates are represented by triangles and calibrated AMS radiocarbon dates by circles; error bars are shown if larger than the symbol size. Fluvial deposits are shown in black- and white-filled symbols (for high vs. low sedimentation rate deposits, respectively), whereas dunes are represented by gray-filled symbols. Ages for the upper Ghaggar-Hakra system are from Saini et al. The temporal extent of each Harappan phase is

indicated by vertical dashed lines (E = Eearly; M = mature; L = late). (*Giosan et al*)

who relied on annual floods to sustain their economy. Good preservation of numerous archaeological sites at locations seemingly vulnerable to flooding, erosion, or burial suggest that, as aridity intensified, monsoon-augmented floods became less frequent and/or less intense. The most spectacular case of climate-controlled landscape transformation was the Ghaggar-Hakra system, which became ephemeral and was largely abandoned.

These thoughts have recently been given substance in an extensive study by Giosan et al (53). The study, based on sound morphological and chronological basis and combining the latest archaeological evidence with state-of-the-art geoscience technologies, provides clears evidence that climate change was a key ingredient not only in the rise of the Indus Civilization but also in its collapse. The study also resolves a long-standing debate over the source and fate of the “Sarasota”, the sacred river of Hindu mythology and largely identified with the Ghaggar-Hakra River braids.

During the early Holocene, that is prior to 10,000 years ago, the wild and forceful Indus and its tributaries flowing from the Himalaya cut valleys into their own deposits and left high “interfluvial” stretches of land between them. However, vial” stretches of land between them. However, 6,000 years ago, as rainfall decreased and aridification intensified in the region, the fluvial landscapes in Harappan territory became remarkably stable. Upstream on the alluvial plain, the large Himalayan rivers in Punjab stopped incising, while downstream, sedimentation slowed on the distinctive mega-fluvial ridge, which the Indus built in Sindh. This fluvial quiescence suggests a gradual decrease in flood intensity that probably stimulated intensive agriculture initially and encouraged urbanization in the Indus plains around 2,500 BC. Mapped on top of the vast Indus Plain, the archaeological and geological data shows that settlements bloomed along the Indus from the coast to the hills fronting the Himalayas, as weakened monsoons and reduced run-off from the mountains tamed the wild Indus and its Himalayan tributaries enough to enable agriculture along their banks.

“As monsoon drying subdued devastating floods, the land nearby the rivers - still fed with water and rich silt - became just right for large scale agriculture.... The mega-ridge, cut by the Indus is a surprising indicator of the stability of Indus plain landscape over the last four or five millennia. Remains of Harappan settlements still lie at the surface of the ridge, rather than being buried underground.” (53).

This lasted for almost 2,000 years, but further decline in monsoon precipitation led to conditions adverse to both inundation and rainbased farming. By 4,000 years ago, their rivers drying, the Harappans started to experience economic stress which increased by the passing day. The agricultural usrplus being severely reduced, the urban centers could not be maintained anymore. The Harappans had the choice to move or perish. They had an escape route to the East toward the Ganges basin, where monsoon rains remained reliable.

“We can envision that this eastern shift involved a change to more localized forms of economy: smaller communities supported by local rain-fed farming and dwindling streams,” said Fuller, one of the researchers. “This may have produced smaller surpluses, and would not have supported large cities, but would have been reliable.” Such a system was not favorable for the Indus Civilization, which had been built on bumper crop surpluses along the Indus and the Ghaggar-Hakra River in the earlier wetter era. This dispersal of population meant that there was no longer a concentration of workforce to support urbanism.“Thus cities collapsed, but smaller agricultural communities were

sustainable and flourished. Many of the urban arts, such as writing, faded away, but agriculture continued and actually diversified," said Fuller.

In summary, the study showed that the slow eastern shift of the monsoons is what initially supported the civilization by encouraging agriculture, but as the monsoon shifted further east, it weakened the rain-fed rivers that were the lifeline of the civilization. It also drastically decreased the area of seasonal flooding along the snow-fed rivers, such as the Indus and its major tributaries. As the arable land decreased, the agricultural production fell. This, in turn, diminished, or entirely eliminated, the surplus that was needed for supporting that part of the population that was not involved directly in agriculture, which in turn led to diminished social complexity.

Contrary to earlier assumptions that a large glacier-fed Himalayan river, identified by some with the mythical Sarasvati, watered the Harappan heartland on the interfluve between the Indus and Ganges basins, Giosan team showed that only monsoonal-fed river-braids were active there during the Holocene. As the monsoon weakened, these monsoonal rivers gradually dried or became seasonal, affecting habitability along their courses. Hydroclimatic stress increased the vulnerability of agricultural production supporting Harappan urbanism, leading to settlement downsizing, diversification of crops, and a drastic increase in settlements in the moister monsoon regions of the upper Punjab, Haryana, and Uttar Pradesh. At the same time the size of all these settlements - old and new - substantially decreased.

The present Ghaggar-Hakra River and its tributary rivers are currently dry or have seasonal flows. Yet rivers were undoubtedly active in this region during the Urban Harappan Phase. Giosan team recovered sandy fluvial deposits approximately 5,400 years old at Fort Abbas in Pakistan, and recent work (54) on the upper GhaggarHakra interfluve in India also documented Holocene channel sands that are approximately 4,300 years old. On the upper interfluve, fine-grained floodplain deposition continued until the end of the Late Harappan Phase, as recent as 3,000 years ago (54). This widespread fluvial redistribution of sediment suggests that reliable monsoon rains were able to sustain perennial rivers during the Holocene and explains why Harappan settlements flourished along the entire Ghaggar-Hakra system without access to a glacier-fed river. However, the flow in these river-braids could not be maintained when the rainfalls shifted further east. Strictly monsoonal rivers maintaining a groundwater-fed base flow are now active only on the more humid Ganga basin. Giosan team also documented renewed fluvial deposition on the lower Ghaggar-Hakra system approximately 700 years ago, which indicates that seasonal monsoon flows intensified episodically during the late Holocene and may provide an explanation for the high concentration of medieval fortified sites in this region (55).

Settlements of the post-urban period are preferentially located near the easily flooded region at the confluence of the Indus with rivers in Punjab or in eastern regions with more reliable monsoon rains. Diversification of agriculture towards Kharif (summer) rain-based crops and the increase in drought-tolerant crops like millets at the end of the urban phase reveal intense efforts to adapt to hydroclimatic stress at the arid outer edge of the monsoonal rain belt.

Although snowmelt continued to regularly provide water to the Indus and its Himalayan tributaries, the Harappans did not develop canal irrigation. In contrast to inhabitants of Mesopotamia and Egypt, which were surrounded by arid lands, the Harappans had the option to migrate east toward more humid regions of the IndoGangetic Divide. Migration toward the periphery could have contributed to

reduced population in the core region of the Harappan domain and the decline of urban centers.

The unprecedented scale of hydroclimatic stresses must have increased the vulnerability of Harappan society, but does not provide a simple, deterministic explanation for the transformations in site size, distribution, and interrelationships across the whole civilization area (32,42,43). The longevity of the decentralized late Harappan phase and continued habitation documented in places in Sindh and lower Punjab suggests that the perennial flows of the Indus and its Himalayan tributaries still flooded agriculturally viable lands, albeit less extensively than earlier. As a lesson from the past, the possible return to stronger monsoon-augmented floods, similar to the disastrous events of 2010 in Pakistan, may render current flood controls and irrigation systems vulnerable and require the large-scale adaptation of modern society in the Indus Plain (53).

The shifting of monsoons pattern towards the East and with it the depletion of agricultural resources in the West is emerging the most credible cause of the Harappan collapse and a general shift of population from west to east during the early second millennium BC.

Climatic change in the true sense is a world phenomenon. Rainfall regime fluctuations during the Bronze Age have been detected in other regions also, but no precise pattern can be identified. While Issar (85) claims for the Levant a fall of annual precipitation between 2400 and 2000 BC, Weiss et al. (86) find 2200 to 1900 BC the driest years in northern Mesopotamia and Syria. The last mentioned scholars do not explain adequately the micromorphological and other data on which their argument is based. The alleged collapse of 2200 BC is posited on a 'sudden' abandonment of settlements, itself questionable. Butzer (39), meanwhile, finds evidence in Egypt for dessication and exceptionally low Nile floods, not only between 2250 and 1950 BC, but also between 3000 and 2800, in those very centuries when the Egyptian civilization was developing!

`Egypt is a hyperarid land with less than 10 cm rainfall in the year today; lowering of rainfall by even a small margin would have made an appreciable impact on pastoral subsistence in the eastern and western deserts and on plant growth. Yet, the fall in precipitation around 2250 BC did not bring Egyptian civilization to an end even though incursions from Asia had also begun, and there was a political interregnum, known as the First Intermediate Period (2181-2040 BC). The character of kingship, the ideology of death and the afterlife, the system of writing, and Egyptian technology endured. The hieroglyphic script and classical Egyptian language that took shape around 2600 BC, would flourish into the iron age in the first millennium BC, at which stage their usage became restricted to the religious and official spheres. The most eloquent testimony of cultural continuity was, however, the vibrant literary tradition. A popular piece of prose written in the time of the Old Kingdom (perhaps in the twenty-third century BC) was 'The Instructions of the Vizier PtahHotep', containing more than thirty maxims delivered by a father to his son on how to get ahead in the world. Entire passages of this text are incorporated in the 'Instructions of Amen-em-Opet', who was a minor official during the Late Kingdom.

Ratnagar (27) questions if It is doubtful whether the eclipse of a civilizational set of traditions and their interrelationships can be explained by climatic change. We do not know how rapid the onset of aridity would have been in the relevant regions, and we have said that its impact would vary according to local conditions. Human societies like that of Egypt have often shown the capacity to adjust to or recover from adversity, and there are references in Egyptian literature to the utilization of grain stores and successful distribution of food in the affected areas at such times.

This holds true even for the phenomenon of damaging river floods. Butzer (39) found evidence of a series of catastrophic floods of the Nile, river levels say 2 m higher than average on the flood plain between 1840 and 1770 Be, but this period in Egypt saw robust administrative institutions being established, strong rulers, and trade with the eastern Mediterranean and with Nubia. The Egyptian evidence alerts us to the dangers of the reasoning of the sort epitomized in the Gujarati proverb *kagdanu besvun ane dalnu padvun* ('the alighting of the crow and the fall of the branch'): two phenomena that appear sequentially or contemporaneously in the archaeological sequence need not be in causal relationship to each other (27).

Resource Depletion: Resource depletion arguments are perennial favorites in collapse studies. They have been prevalent for some time in Mesoamerican and Southwestern studies, but have also begun to gain prominence in eastern North America, Europe, and the Near East. The possibility of resource depletion is, of course, a major concern to contemporary forecasters (56). Resource depletion arguments, to judge from the number advanced, are perpetually attractive. There is something to such arguments, for no society can maintain itself when its resource base is depleted beyond a certain point. Yet long before that point is reached a whole range of responses may be undertaken. Here is the first of several problems which make one uneasy at the resource depletion theory.

The resource depletion argument, at base, ascribes collapse to economic weakness, often suddenly induced. Most investigators would assume at the outset that economically weakened societies are indeed prone to collapse, so this point may be taken as a warranted assumption. One supposition of this view must be that the societies sit by and watch the encroaching weakness without taking corrective actions. It is curious that they would collapse when faced with precisely those conditions they are equipped to circumvent. This objection has been conclusively countered by Jared Diamond in his celebrated book, *Collapse: How Societies Choose to Fail or Succeed.* There have indeed been a number of societies in history who precisely did nothing when faced with the problem of resource depletion. Some societies even continued accelerating the process of resource depletion in the face of coming catastrophe. Apart from this inertia, it is entirely possible that environmental fluctuations or deterioration may occur which existing production systems and social arrangements cannot overcome.

Tainter (1) argues that if a society cannot deal with resource depletion (which all societies are to some degree designed to do) then the truly interesting questions revolve around the society, not the resource. What structural, political, ideological, or economic factors in a society prevented an appropriate response? This is no idle question, however simple it may seem. One study of the Hohokam of the American Southwest, for example, asserts that environmental deterioration caused collapse in one instance (Sacaton to Soho phases), but increased complexity in another (Soho to Civano phases). Elsewhere, J. Hughes (38) cites deforestation as a cause of the Roman collapse. Yet Wilkinson (57) has shown how in late- and post-Medieval England, deforestation spurred economic development and, far from leading to collapse, was at least partly responsible for the Industrial Revolution. Clearly the major factor in understanding these episodes is not that a resource was depleted, but that the respective societies responded in different ways. Why would resource stress lead to collapse in some instances, and to increased complexity and economic intensification in others? Citing resource depletion does no more than scratch the surface of an enormously complex matter.

Butzer (11,12) and R. McAdams (73), in awareness of such problems, present scenarios in which environmental, social, and political factors intertwine. Both have developed plausible explanations of

collapse in the specific cases they have studied. Yet while the incorporation of political factors in Butzer's and Adams' studies is a strength of their individual efforts, it also betrays a weakness in the broader approach. To the extent that elite mismanagement or miscalculation figures in, for example, the Mesopotamian cases, we are left with a major explanatory *lacuna*.

The issue of resource depletion looms large in the studies of the Harappan collapse and there are a variety of resource depletion arguments. Both Thapar (28) and Sharer (29) as well as Ratnagar (27) implicate depletion of vital resources in Harappan collapse.

It has been shown above that the continual shifting of monsoons to the East and the resulting decrease in the frequency and the extent of river floods had put the Harappans in an unenviable position of depleting source of living, the food. As a response to this adverse situation on which they had but little control, the Harappans exercised a number of responses. First, they started to move to the areas that offered them better agricultural potential. These areas happened to be generally east of their erstwhile core region. The rainfall was somewhat better and the water streams flooded more regularly. Second, they shifted their settlements to the areas near the confluence of the rivers in Punjab and Sindh and near numerous waterholes that were scattered along the erstwhile river beds. Third, they decreased the size of their settlements but increased their number and continued living along the rivers in the areas which still afforded substantial flooding for their agricul ture. Fourth, and probably equally important, they took up the cultivation of summer crops, especially those that could be grown in relatively arid conditions - the millets, such as Jawar and Bajra - along with their traditional crops of barley and wheat.

These responses were, of course, not sufficient as to produce an agricultural surplus through which they could maintain their existing cities or found some new ones, but the life went on in the Indus Valley and the adjoining areas to their east. In this respect, it was not a failed society, it was merely an adequate response to the circumstances which they could hardly control. The cities, towns, and large villages were forsaken for more appropriate smaller communities who kept on earning their living through agriculture and pastoralism as they did in the preceding urban phase.

New resources: This theme, decidedly a minority view, presents a reversal of the resource depletion theory. Here the suggestion is that new, bountiful resources lead to collapse. This argument derives squarely from the integration school, which sees complexity as a response to stress conditions, including resource inequities. When such inequities are alleviated, the need for ranking and social control may break down, leading to collapse to a lower level of complexity (58). A variation on this is presented by Martin (59), who argues that South American foragers dropped in complexity following the depopulation attendant upon European contact. Although Martin is vague about causal mechanisms, one route could be alleviation of pressure on resources, leading to the situation Harner envisions. Jelinek (60) argues similarly that along the Pecos River in New Mexico sedentary horticultural villages were abandoned for mobile bison-hunting when increased moisture between 1250 and 1350 A.D. led to the spread of grasslands, and increased local availability of bison.

To an integration theorist, Harner's (63) stress-alleviation argument has some appeal, but much less to a conflict theorist. In any event it is mainly restricted to simpler societies. It has no power to explain the fall of Rome, much less many other cases (1). Still, an archaeologist has been quoted as saying that the “Hardpans were the victims of their own success”. How, it was not explained.

SOCIAL AND CULTURAL ISSUES

A host of non-materialistic explanations have also been offered. Decadence of the elite, the loss of spirit, revolts of the peasants against the city folks, the law of nature (the one that is borne, must eventually die), mysterious factors, failure of the Harappan to adapt, and the imbalance in the social composition are some of them.

Insufficient Response to Circumstances: The basic factor that unites the rather disparate arguments under this theme is the notion that fundamental limitations of social, political, and economic systems prevent an appropriate response to circumstances, and this makes collapse inevitable. Two of the major views considered here, well known in the history of anthropology, are those of Betty Meggers (64) regarding environmental limitations to civilization, and Elman Service (65,66) on the 'Law of Evolutionary Potential.' Toynbee's 'Challenge and Response' theory is not included.

Meggers' argument was simple: more productive environments can produce more complex societies. More specifically, "... the level to which a culture can develop is dependent upon the agricultural potentiality of the environment it occupies." As this potentiality improves " ... culture will advance" (64). Classifying tropical rainforest as inadequate in this regard, Meggers encountered the problem of the Maya. Her solution: Mayan civilization must have been introduced from elsewhere, and the history of Mayan occupation should represent decline or disintegration. Introduce a civilization into an environment that is inappropriate, and ultimately the environment will win. Mayan society could not respond appropriately to its circumstances.

A similar view argues (sometimes implicitly) that complex societies are unstable, not just in certain kinds of environments, but inherently. Kent Flannery (67) and Roy Rappaport (68) are the best known proponents of this line of reasoning. These authors suggest that more complex societies are more closely interlinked, with greater mutual influences among parts. Self-sufficiency and autonomy of local systems are reduced as specialization increases. As special-purpose subsystems become increasingly differentiated, stability declines. Disruptions occurring anywhere will be spread everywhere, whereas in less complex settings a society would be cushioned against disruptions by less specialization, less interlinkage among parts, and greater time delays between cause and ultimate outcome. Civilization itself, to Rappaport, may be maladaptive: "Civilization has emerged only recently - in the past six thousand or so years - and it may yet prove to be an unsuccessful experiment' (68).

Elman Service's 'Law of Evolutionary Potential' (65) states as follows: 'The more specialized and adapted a form in a given evolutionary stage, the smaller its potential for passing to the next stage' (65). Specific evolutionary 'progress' is inversely related to general evolutionary 'potential' (65). Within this view, success at adaptation breeds conservatism; dominant polities are less able to accommodate change. Successful complex societies become locked into their adaptations, and are easily bypassed by those less specialized. So by having greater flexibility, less complex border states gain an increasing competitive advantage, and are thus able ultimately to topple older, established states (65,66). Service uses this principle to account for the success of barbarians along China's northern frontier, in Mesopotamia, and in Mesoamerica, and for discontinuities in political developments in Peru (66). In each case, he suggests, newly civilized peripheral populations adopt some competitive advantage (an organizational feature, weapon, tactic, or the like) that the old center is too conservative to adopt, and thereby rise to dominance (66).

Service's Law can perhaps be expanded into a more general 'failure to adapt' argument. Several

authors make such an argument: that complex societies disappear because of some inability to bring forth an appropriate response to circumstances. Melko (69), for one, argues (like Service) that once established a civilization's capacities for change become limited. Collapse results from sociopolitical ossification, bureaucratic inefficiency, or inability to deal with internal or external problems. Ho attributes the decline of Ming China to such matters (70). Writing as a sociologist, Buckley argues that rigidity in any social institution must lead to internal upheaval or to ineffectiveness against external challenge (71). Gregory Bateson suggested that civilizations expire by loss of flexibility, and that flexibility is lost automatically if it is not exercised (72).

In his book, *Collapse*, Jared Diamond recounts several reasons of collapse, the most common of which is that societies often fail to even attempt to solve the problem. Another reason Diamond cites for failure of societies is the reluctance to abandon a policy in which the society has heavily invested. An example of this would be Christian conventions of the Norse in Greenland prevented them from making the drastic lifestyle changes that might have helped them to survive longer.

By and large, these 'failure to adapt' arguments are superior in one respect to many considered up until this point. Recognizing that an understanding of collapse often depends more on the characteristics of the society than of its stresses, these authors postulate causal mechanisms - such as environmental insufficiency and the Law of Evolutionary Potential - to explain why adaptive responses are not made. This is a significant step. Yet as intriguing as some of these explanations are, they seem as a lot to rely on certain assumptions about the nature of complex societies, assumptions that the authors leave implicit. If these assumptions are made explicit, we will find that they give us cause for hesitation. The assumptions seem to revolve around three models of complex societies. For lack of more elegant terms, Tainter calls them the *Dinosaur* model, the *Runaway Train* model, and the *House of Cards* model.

In the Dinosaur model, a complex society is seen as a lumbering colossus, fixed in its morphology, and incapable of rapid change. Locked into an evolutionary dead end, it represents an investment in structure, size, and complexity that is awesome and admirable, yet highly maladaptive. When stresses arise, such a society cannot adapt, and so must expire. Complex societies seen thus present a spectacle of power that evokes both wonder and pity. In colloquial terms, they are all pitiful, helpless giants, and are inevitably outcompeted by newer, leaner, more aggressive societies.The Dinosaur model, as characterized, is coincident with the Law of Evolutionary Potential, as well as with derivative and similar theories. The argument of this 'Law' is that all societies, complex or otherwise, run the risk of adapting so well to existing circumstances that change becomes impossible. Among complex societies this tendency becomes fatal when newer societies acquire capabilities that the lumbering colossus is incapable of adopting.

The Runaway Train model may be a variant of the Dinosaur model, but it has its own distinct characteristics. A complex society is seen as impelled along a path of increasing complexity, unable to switch directions, regress, or remain static. When obstacles impinge, it can continue in only the direction it is headed, so that catastrophe ultimately results. The variety of studies that cite positive feedback mechanisms make precisely this assumption about complex societies. Ferrero's arguments about urbanization in the Roman Empire, Sharer's views about social and economic intensification among the Maya, and Conrad and Demarest's account of the Aztecs and the Inca, all assume that some factor in these societies made it impossible to deviate from their catastrophic paths.

The House of Cards model differs from the previous two. It suggests that complex societies, either as a rule or in certain kinds of environments, are *inherently* fragile, operating on low margins of reserve, so that their collapse is inevitable. Meggers' environmental limitation theory, and Flannery's and Rappaport's maladaptation arguments, fall under this model.

There is much to give one pause in these models and their potential application to the Harappan Civilization. Our present knowledge of this society does not allow us to either conclude or assume that it was inherently fragile, or static, or incapable of shifting directions, or that it could not respond to productivity fluctuations, catastrophes, or other ailments. Nonetheless, the Harappan society seems to be so well-adapted - practically no change in material culture through the entire lifespan of this civilization - that it resembled a dinosaur. When the environmental stresses emerged, it was incapable to adapt and expired as an urban polity. It inspired awe but at the same time invited pity. Or, it saw the changed situation and, instead of continuing on the same path as a runaway train, changed its direction and adapted to new circumstances.The Harappan survived but survived as a simpler society.

Conflict/Contradictions/ Mismanagement: Judging by the number of authors whose work falls under this theme, it may be the most popular approach to understanding collapse. There is some variety in the approaches lumped herein - class conflict, Marxian contradictions, and elite misbehavior or mismanagement - but the common underlying theme is antagonism and conflicting goals between social classes. Collapse is thought to result from such conflicts through withdrawal of support and outright revolt by peasant populations, and by elite self-serving and political mismanagement. There are a variety of both general and area-specific applications of these ideas but since we do not know much about the political working of the Harappan society, it is hard to judge if these considerations have any relevance to the collapse of the Harappan Civilization.

Tainter advances two points regarding elite exploitation and mismanagement. These are: 1. exploitation is a *normal* cost of stratification;

and
2. bad government is a *normal* cost of government.
Clearly these points cannot be regarded without controversy. The argument is that these things occur with such expectable regularity, and are so difficult to predict, that a society finding it necessary to invest in stratification and/or government must expect exploitation and/or misgovernment as a normal cost of that investment. It seems difficult, from the experience of history, to argue otherwise.

Social Dysfunction: This is a vague theme that requires little discussion. Its essence is that societies collapse due to mysterious internal processes whose nature cannot be specified. Popular writers like to think in terms of social dysfunction, and often expound vaguely about unraveling of the fabric of society. These studies alike offer neither sources of stress nor causal mechanisms that can be analyzed in any objective manner. They are unsatisfactory as explanations for collapse.

Mystical Factors: Mystical explanations are second in popularity to those that postulate class conflict. Their essence is that they contain no reference to empirically knowable processes, and often make value judgements about particular societies. Mystical explanations rely on concepts like 'decadence,' 'vigor,' or 'senility'; societies are ranked according to these subjective factors, and collapse is explained accordingly. 'Decadent' societies, in this view, are seen negatively, and are axiomatically liable to disintegrate. Many, many such theories have been developed, of great diversity, indeed often of diametrically opposite views. They are united in their lack of concern with

empirically knowable or observable factors, and in their reliance on an author's subjective assessment of individual societies (1).

In contrast to the themes discussed to this point, mystical explanations are presented more often as universal theories than as case-specific scenarios. There are plenty of the latter to be sure, but for once they need not dominate the discussion. The best known of such accounts are those of Spengler and Toynbee, but these authors are merely the most prominent of a crowded field, a field with a long history indeed.

Mesopotamian historiography contains what must surely be one of the oldest explanations of collapse. In considering the fall of Sargon of Akkad and of the Thira Dynasty of Ur, the decline of empires was ascribed by Mesopotamian writers to the impiousness of rulers, and to marauding enemies sent by the gods as punishment. Cities flourish under good kings, but suffer under impious ones.

Anything of sort could have happened to the Indus Civilization or none of it could have any relevance. If we could read their writings, the Harappans would probably have been talking about their rulers as being impious and the elite blaming the common people as being lazy and immoral. Even if we could hear their voices, it would still not matter: the mystical factors are inherently unknowable and value judgement has no place in scientific enquiry.

CONCLUSION

What were the reasons for such a drastic cultural change, and what did cause it? We have enumerated several theories and hypotheses which attempt to answer this question but none seems to be convincing in all respects. Probably there was not one cause; there might have been more than one enabling factors. Opinions will, of course, differ, but we would put our marbles in the basket of climate change, caused by increasing aridity that started right after the end of the Ice Age. As the ferocity of the floods decreased due to a gradual decrease in rainfall, it became possible to undertake a flood-based agriculture on a large scale, consistently producing a food surplus on which the great Harappan cities could rise. This was, however, a brief period of time - merely 2000 years or so. As the aridity further increased, the flood-irrigated areas decreased, agricultural production diminished, pastures for the grazing of animals shrank, and people started to disperse in search of “greener pastures”, which they saw toward the East. In the absence of the ‘surplus‘ on which the city folks fed, the cities dwindled, the social cohesion of the society disintegrated, arts and crafts took a nose dive, and a general chaos ensued. The barbarian tribes at the western edges of the civilization saw this weakness, they started to encroach on the arable lands, and made incessant raids on the established villages and towns. A final blow was thus struck, the civilization as a whole came down tumbling.

This is, of course, a simplistic picture and a lot more could have been involved. For example, discounting the theory of increasing aridity under a change of monsoonal direction towards east, one could buy the Tainter’s idea as an alternative. The available resources and the sociopolitical structure of the Harappan society may have been such that further increase in complexity was not possible unless the state (or the commonwealth of the city states) continued expanding and bringing new resources under control. As the expansion came to a halt, the Harappan society quickly reached a state of diminishing returns on complexity. It is possible that the ‘cost‘ continued unabated while the return on investment shrank. The people were better off to abandon the whole system, they returned to a system of lesser complexity, and urbanization came to an end.

As a very general principle, the application of this framework to the Harappan Civilization cannot be automatic or mechanical. Each society that has collapsed has done so under a set of circumstances that were partially unique. The application of a general principle to such diversity requires different considerations in each case, including sensitivity to such diversity to the peculiar circumstances of local histories, such as, in the Harappan case, the climate change and the intrusion of barbarians.

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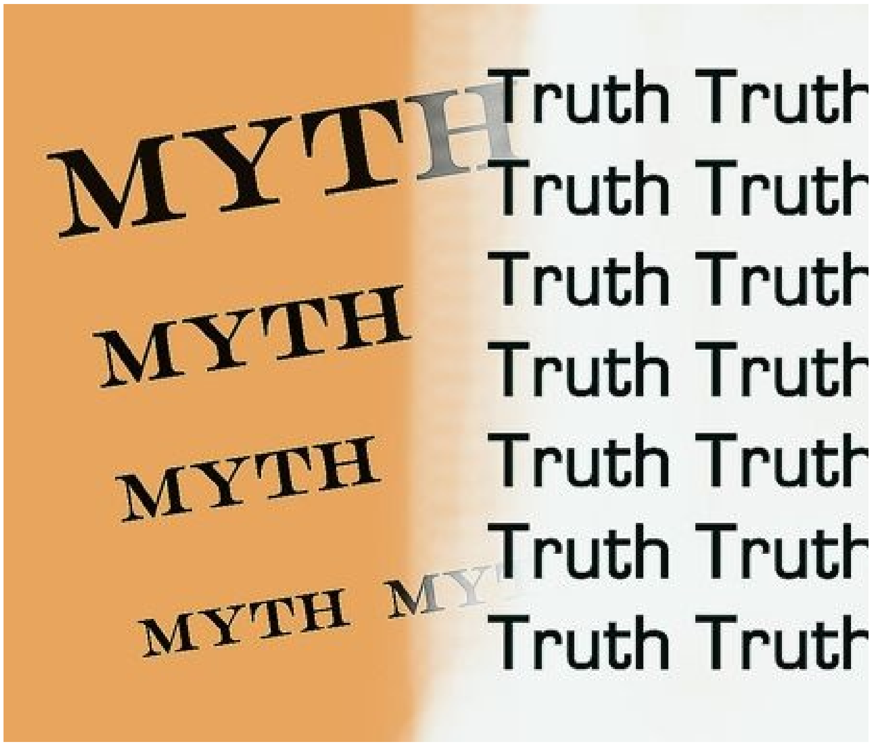
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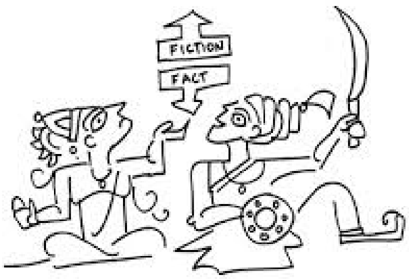
SECTION V


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Mythmaking at Harappa

Chapter V.1. Rewriting of History Chapter V.2. Aryanization of the Harappan Civilization Chapter V.3. The Vedic Sarasvati: A “Lost” River Section V.

Mythmaking at Harappa



Anachronistic projections of modern ideas into antiquity, complicating our abilities to distinguish between reality and mythology, are common in historical studies; so is the repetitive updating of ancient antecedents in the updating and reconciliation of oral and

written traditions in commentarial traditions. While political distortions of ancient history can be expected in all civilizations, arguably the most extreme examples show up in India, thanks in part to the major role mythology continues to play in the diverse religious traditions loosely associated with the modern term ‘Hinduism‘ and which continues to play a predominant role in the reconstruction of prehistory. These bizarre modern fantasies are particularly projected on the Indus Civilization, reflecting the ideological concerns of secular nationalists, warring Hindutva and Dravidian political groups, oppressed tribal peoples and dalits, and even modern yoga adherents. Nearly all these fantasies in some way involve the Indus script on the seals; the pipal leaf motif on the Harappan pottery; and the water tanks, such as the Great Bath at Mohenjo-daro. If it is not enough, then some elongated stones are pulled up and call them the “Shivlinga”. Some of these Hindutva archaeologists would even bring forth the domestic hearths from a few ‘Harappan’ settlements (all of them in the present-day India) and fantasize them as the “fire alters” for veneration of Agni. In short, a mixture of nationalist pressures on Indus archaeologists, academic careerism and sterile research turf wars, and simple intellectual inertia continue to impoverish our understanding of the Indus Civilization in general and its ideology and religion in particular. And, all of this is being done on the basis of “incontroversial archaeological proof”.

The pride of place is given to the equation: The Harappan = The Aryans = Hinduism. A view is being assiduously propagated of late, with the active endorsement of the *Hindutva* forces, that the "Aryans" are the true authors of the Indus culture, that the eastward movement of the "Aryans" into the Indus Valley and to India is a myth, that the Indus and Vedic cultures are identical, that the Vedas are the source of the Indian culture, and that the Vedic age began in the fourth, even fifth, millennium B.C. thus making the entire Indus Civilization a minor chapter in the greater “Vedic Civilization”. A second view, which is in deed integrally connected to the view just above described, and which is being propagated equally assiduously, is that the Ghaggar-Hakra River braids that drain the Siwaliks was actually the mighty river, the Sarasota, to which the Rigvedic bards composed so many poetic songs and which the Vedic seers elevated to the status of a goddess. According to this mythmaking, then, the Indus Civilization should more appropriately be called the Indus-Sarasvati Civilization, better still Sarasvati-Sindhu Civilization, or still better simply Sarasvati Civilization. The idea is to drag the whole Indus Civiulization into the gambit of the Vedas and thereby into the “Aryan Civilization”,

meaning the Hindu culture.

If these fantasies were restricted to the “Vedic scholars” or a few “NASA scientists” turned prehistorians or even Indus archaeologists, we would not take notice of these overzealous pronouncements beyond a silent amusement but it is unfortunate that a few bonafide archaeologists and prehistorians have also joined them in this make-belief passtime. These opinions, however outlandish they may appear to be, cannot be ignored. This Section confronts these issues, although somewhat lightheartedly or somewhat polemically. Before we begin, however, we want to make note of a broader problem with the mainstream, government sponsored, Hindutva reading of the Indus Civilization, wherein RgVeda becomes the primary source of history, where history becomes mythology, and where archaeological facts are twisted to conform with these myths, and where factoids are freely invented to prove a point. Several scholars of repute, such as Shereen Ratnagar, Romila Thapar, Ram Sharan Sharma, and Rajesh Kochhar have been resisting this onslaught on history but the general momentum is in favor of the demagogues and the governmental sponsored institutions.

Chapter V.1.

Rewriting of History



Even a cursory overview of worldwide archaeological practice in the twentieth century (when archaeology was professionalized and institutionalized as a discipline) shows innumerable

examples of situations where historical evidence established through archaeology has been used to ratify partisan ideologies, but arguably the most extreme examples show up in India, where the discipline of archaeology is being increasingly exploited for meeting the demands of religious nationalism, for offering material proof for the primordiality of Hindu *dharma*, and for substantiating claims that the 'Vedic Hindu' had an indigenous origin within the subcontinent and that the Indus Civilization was in fact a 'Vedic Civilization'. Over the last decade, statements such as 'new astrological and archaeological evidence has come to light which suggests that the people who composed the Vedas and called themselves Aryans, were indigenous to India, and were the architects of the Harappan Civilization' (1) have not only propped up the doctrinaire of Hindutva, but have also acquired an official sanctioning from many within the professional community of Indian archaeologists. They are actively involved in a program of promoting the premise that it is possible to unearth "true histories" (or religious fantasies) objectively through archaeological means. And, if the needed archaeological 'proof' is not available, it would not do any harm if they invent one in the sake of the 'national interest'. The Indus Civilization is a special focus for these activities and the Vedic mythology continues to play a major role in the reconstruction of Indus history. In the current official and quasi-official effervescence over newfound truths about the Indus Civilization, 'true' and 'noncolonial' accounts of history keep coming in a continuous stream from Indian residents and, especially, nonresident oracles. In these activities the question of "Aryans", especially their authorship of the Indus Civilization, has come to occupy a preeminent perch. For good measure, the Ghaggar-Hakra River braids have come to be identified with the Vedic Sarasvati (2).

These are not the only topics which are coming under revision; there is a wholesale effort, often sponsored by the federal and state governments of India and other official or semiofficial organizations, such as the universities and parochial think tanks, the purpose of which is to rewrite the history of India, in fact the whole of South Asia, in such a way that the narration satisfies the nationalistic and religious urge of the general public and the mainstream media. In this process, it is OK if one needs to twist a few historical facts, invent 'new discoveries", or fabricate a new narration of prehistory where devotional hymns of a pastoral nomadicl folk, narrated orally for more than a thousand years, become a primary source of history. Naturally, where faith takes hold, logic takes flight and truth does not matter.

There are a number of mouthpieces of this *Hindutva* interpretation of history, some within India but most in the USA among a vocal section of the Indian diaspora. A few of them have achieved some degree of respectability and are often quoted. V.S. Wakankar is one of these indigenous oracles on archaeology. He assumes that everything worthwhile could have invented by the "Aryans" (thus the

Harappans must be Aryans) and everything worth taking note must have originated on the holy banks of the Sarasvati. Thus, to begin with “the upper Sarasvati region forms the nucleus of human evolution” (3). In crediting the Ambala and Karnal Districts of Haryana with producing the first human, Wakankar expressly recalls to us the fossil of *Ramapithecus* found in the Siwaliks. He apparently had not read that *Ramapithecus* is the female of *Sivapithecus*, found subsequently in Pakistan, and that both of them belong to that branch of the evolution tree which has led to the ape Orangutan, not to human beings like us.

US Swami David Frawley is another voice that proclaims that everything worthwhile in India and everywhere else originates with the “Aryans”. It is only the western missionaries who have distorted the history. While protesting against the "racist" views of "colonial" western scholars like Max Muller, the swami tells us that the IndoEuropeans and other Aryan peoples were migrants *from* India, not that the Indo-Europeans were invaders [or migrants] into India. In this new version of the race theory, however, the Aryans did not simply go out from India, they went off from the banks of the Sarasvati. Thus, Frawley speaks of "the pre-Indus period in India", namely that of the YajurVeda, "when the Sarasvati River was more prominent" (4). Then, there is Koenrad Elst, who, after making all the right denunciations (like calling Professor Romila Thapar from JNU’s History Department, a “bookworm”), places the Aryan homeland squarely in Punjab, Haryana and Western Uttar Pradesh (all in the present-day India), from where they dispersed to everywhere else (5).

There is also the US "NASA scientist," N.S. Rajaram. He tells us that "the Sarasvati River and the Sarasvati civilization are inseparable", and the latter name is the correct one to give to what has so far been known (incorrectly) as the Harappan or the Indus Civilization". Indeed, "the ebb and flow of the ancient Sarasvati River determined the fate of the Harappan Civilization" (6). That the two great excavated cities of the Indus Civilization, namely, Harappa and Mohenjo-daro, or such sites as Dholavira or Lothal are not on the Sarasvati, however it might be elevated from its status as a seasonal stream, does not matter to the proponents of the Sarasvati nomenclature. Giving a name amounts to half the battle, and if the Indus Civilization is to be rechristened ‘Sarasvati Civilization’, name-capture, not argument, is the thing that matters. It may be recalled that John Marshall had used the name "Indus Civilization" in 1931, and Stuart Piggot had preferred "Harappa Culture" in 1950. Both terms are valid, the first referring to the geographical region of the Indus basin, and the other to the type-site.

In case we do not forget, there are two archaeologists of sort: B.B. Lal and S.P. Gupta, the shining stars of Hindutva academic circle. As late as 1984 both of these gentlemen conformed to the standard usage when they edited the *Frontiers of the Indus Civilization*. But thereafter the pull of the Sarasvati exerted itself, and in 1996 appeared S.P. Gupta’s *The Indus-Sarasvati Civilization* (7); V.N. Misra, full of authority as Director of the Deccan College Postgraduate Institute, Pune, India’s premier research institute of archaeology, contributed an enthusiastic review of this book. He drew attention to the indication in the title that "the Harappan Civilization was not the product of one river alone, but of two rivers, the Indus and the Sarasvati". One can then pursue an unspoken chain of logic: If the alleged Sarasvati system was important for the Indus culture, its people must have held Sarasvati sacred; and if they held such a belief, they must have been Vedic Aryans. So Professor Misra could more easily uphold Gupta’s argument that "the Harappan and the Vedic were neither two different culture-complexes nor the earlier (*sic*! former) preceded the latter”.

Fortunately, there are some archaeologists and prehistorians in India who are desperately trying to

stem this tide of nationalistic hysteria. The most prominent among them are Shereen Ratnagar (8), Romila Trapar (9), Ram Sharan Sharma (10), Rajesh Kochar (11), D.N. Jha (12), Suraj Bhan (13) Sudehna Guha (14) and Irfan Habib (15). There are also some voices in the West who find this onslaught on history distasteful. Michael Witzel and Steve Farmer can be mentioned as two of them. Cynthia Ann Humes (16) is another. In general, however, the western scholars have been more interested in the broader issue of the Indo-Europeans rather than their relationship with Pakistan and India.

Like any branch of knowledge, the essential requirement of History is the pursuit of truth. This requires one to sift evidence critically. Bias, whether religious, racial, regional or national, or any other, must be avoided. The history of each nation is a part of the history of the world; and it would be absurd to try to project one's own country's history, solely to establish one's superiority over others by one-sided evidence, as if we are pursuing a case in a court of law. The same must be said when we write about the past of particular regions or communities. (*Irfan Habib*)

Steve Farmer and Michael Witzel have been talking about the projections of modern ideas into antiquity and complicating our abilities to reconstruct early cultures while severely distorting our interpretations of archaeological finds; the latter challenging the Hintutva views about the 'indigenous' nature of the "Aryans" and their relationship to the Indus Civilization. Cynthia Ann Humes has recently penned down an article on *Hindutva, Mythistory, and Pseudoarchaeology* (16), giving us an excellent background of this sinister movement. Sudehna Guha tackles the larger question of negotiating evidence in context with the Indus Civilization. We use extended excerpts from these sources for the preparation of this chapter.

The flood of Hindutva writings is so voluminous, and the voices of propaganda so shrill, largely on the Internet and predominantly originating from the Indian diaspora in the United States, that no effective impediment can be constructed against it. The sad part is that this distorted version of history is now a part of the education system in India. There have even been attempts to push this mythology in the school system of California and other states in the USA. There seems to be no other example of mythmaking on such a large scale in recent times, except that of the Holocaust, propagated by the Jewish diaspora in the aftermath of the Second World War. In both cases the history has taken a serious hit. In this chapter we discuss the Hindutva onslaught on ".......Let us first see what are the major new McAlpin, the case for the Indus Civilization being peodiscoveries for Indian History that are being promoted
by the official agencies [of Indian Government]. In a recent Memoir of the Geological Society of India, we have the claim that humankind evolved and diffused from "the upper Sarasvati region", that is, northern Haryana. The late V.S. Wakankar had nothing to go on for this assertion, except the discovery in British times of a fossil-ape (the *Ramapithecus*), in the Siwaliks, though the species is not in the line of hominins but of the orangutan!
pled by speakers of "Proto-Elamo-Dravidian", has been particularly reinforced. To any self-proclaimed patriotic Indian, this should hardly be a matter of concern, since Dravidian languages other than Brahui are entirely confined to India, and so the presence of Dravidians there can only

make the Indus Culture so much more ours! Yet any Dravidian claims to that civilization arouse the utmost bitterness in the ranks of the Sangh Parivar, and desperate efforts are on to establish for it a purely "Aryan" parentage.

Being the nucleus of human diffusion is, not, The first step has been taken through official however, enough: India is now being almost officially declared to have been the original home of the Aryans, on which much more is said in the same Memoir, as well as other quasi-official publications. A great outcry is being raised against the "colonial Indologists", who, on the basis of historical linguistics, established that Sanskrit belongs to the Indo-European family of lan guages, and argued that the proto-Vedic Sanskrit was brought to India by its speakers from outside. The "race" theory has long since been discarded and no one in academic discourse speaks of an "Aryan race." The irony is that while our RSS oracles denounce Max Mueller, Wheeler, etc., as "racists", this does not pre vent them from announcing that "the lndo-Europeans and other Aryan peoples were migrants from India". So says the U.S swami, David Frawley, a much ac claimed source of RSS's historical wisdom. Still an other "scholar", who gets quoted *in extenso* by the HRD Minister himself, is the Dutch-Belgian Koenraad Elst, who in *Aryan Invasion Update,* announces that the Proto-Indo-Europeans went out from "what is now Panjab, Haryana and Western Uttar Pradesh". Another proponent of the same cause is Navaratna S. Rajaram, billed constantly as the "US NASA scientist", and leader of a self-proclaimed "Indo-American School." All of them are enthusiastic builders of a fantasy about the "Aryans", who, it is proudly claimed, gave civili zation to the world, carrying it from India. For this it is necessary that everything "Aryan" in India must go to remote antiquity.
name-alteration. We are now shifting from "Harappan" (the name so far given in official Indian Archaeology to the Indus Culture) to "Sarasota-Sindhu", thereby imposing on the Indus Culture a definitely Vedic nomenclature and thus warding off any non-Aryan pretensions. It matters little that the "mighty Sarasvati" supposedly flowing down to the sea through the Desert is a sheer figment of the imagination with no support from geography or geology (despite the extraordinary claims made in this behalf in the Geological Society's Vedic Sarasvati).

Rival claims to read Sanskrit in the Indus symbols are becoming embarrassingly numerous, each securing considerable publicity, but little support from any plaeographist worth the name. Since the horse and the chariot are so prominent in the Rig Veda, and so wholly absent in the Indus Civilization, a horse on an Indus seal was flaunted about by Rajaram as a path-breaking discovery, until Michael Witzel and Steve Farmer cruelly exposed the fraud in Frontline (13 October, 2000). Having been so

found out is, however, only a minor setback: The "Aryan" assault is being carried to the heart of Dravidian identity itself. It is denied that there was any Dravidian loan-words in Vedic and later Sanskrit; in fact, the Dravidian languages themselves are deemed to be rooted in Sanskrit. Almost every writer of the Sangh establishment, the late K.C. Verma, S.G. Talageri, Rajaram, Elst, and Swaraj Prakash Gupta, to name a few, are up in arms against Dravidian links to any great nonAryan past, let alone to such a prize as the Indus Civilization. There is here a gravely divisive campaign, which

The Rigveda is now said to have been comhas all the potential for exacerbating hostility between the proponents of "Aryan" chauvinism and the "Dravidianists".
posed before 5000 BC, not *ca.* 1500 BC (which latter date has been established mainly by its relationship with the Avesta, not datable to much before 1000 BC, as it is keyed to West Asian chronology). Bronze, we are told, was being "cast" in India by 3700 BC, a "first" in the world. Writing too had been invented here, *ca*. 3500 BC; the "Mahabharata War" was fought in *ca.* 3100 BC, etc., etc. This chronology is based on nothing except one unlikely hypothesis built upon another (or, as in the case of bronze, on fraudulent invention of "evidence"). There then follow claims about "Vedic Mathematics", "Vedic Astronomy" and "Vedic Astrology”, all supposedly created 4000 years and more ago.

We have, then, the crusade for turning the Indus culture into a Sarasvati Civilization. Any ordinary person may be wondering why the Sangh Parivar's propaganda mill is paying so much attention to

One may pause here to note that since all later texts are being given exorbitantly earlier dates, and every intellectual and technological achievement pushed to an obscure, sacred past, the later times begin to appear more and more as sheer dark ages. We are being asked that not only did the alleged inventors of writing in the 4th millennium BC forget to write up the Vedic texts, but their descendants too simply forgot writing altogether for a period of 1500 years or so, before the Mauryas came around. We Indians also coolly forgot the great scientific secrets embedded in our texts, which it is only now given to great NRls like Subhash C. Kak and Navaratna Rajaram to unravel.............”
Iran Habib, 2002



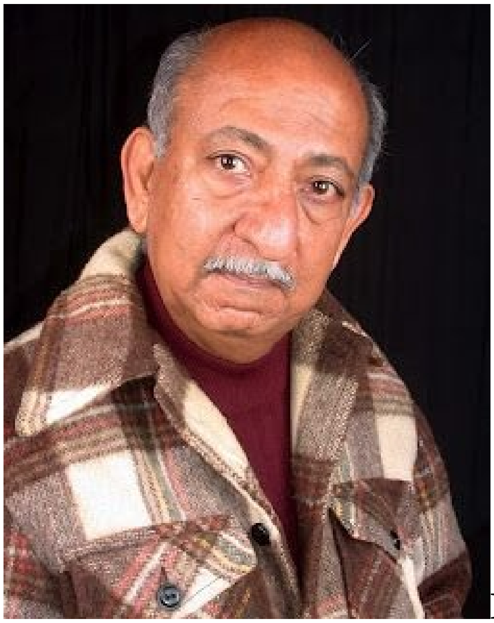
V.S. Wakankar
A Hintutva archaeologist
par excellence

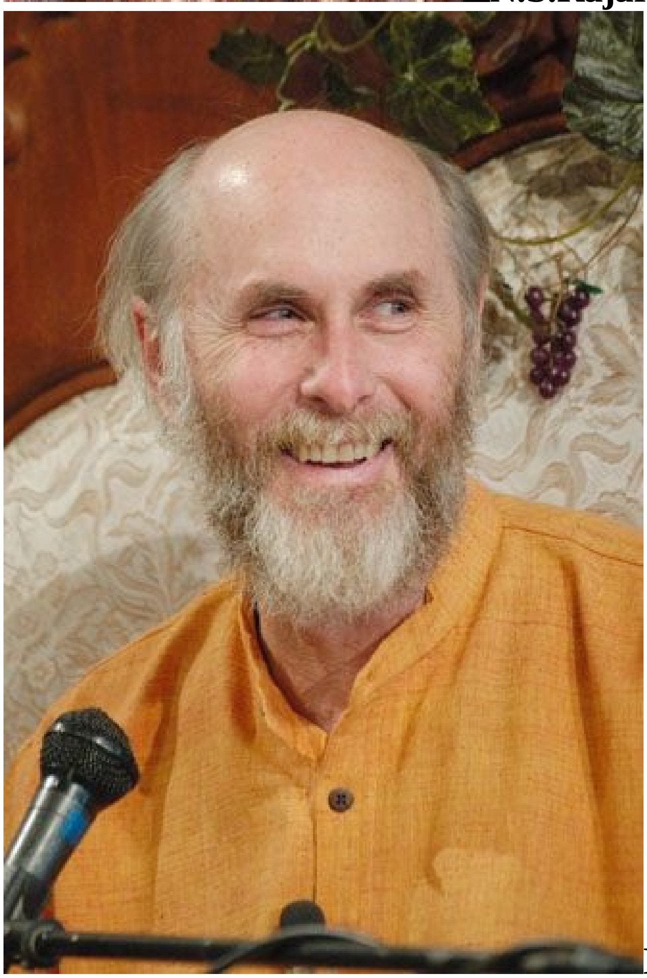
Indus history, beginning with the background offered by Cynthia Humes (16).

The field of Indology is unquestionably rooted in the colonial past, which in itself is a fact that is

often brought up as sufficient cause to suspect - if not outright reject - the theories espoused by scholars descending from Indological lines today. The seeds of our

contested theories originate with Sir Wiloriginate with Sir Wil 1794), an eminent British judge in Bengal, distinguished linguist, and pioneering scholar of what was in his times the new field of Indology, often identified with "orientalism". "Oriental Jones," so named for his having brought so much of Oriental culture to the West, founded and be


N.S.Rajaram


David Frawley

came the first president of the Asiatic Society in 1784. The Asiatic Society became a model for the Bombay Literary Society (1804) and the Literary Society of Madras (1812), and all three of these

societies relied on the translation and interpretation of ancient texts as well as another important source for subcontinetal history: archaeological inscriptions that were transcribed for the journal reader together with careful drawings (17).

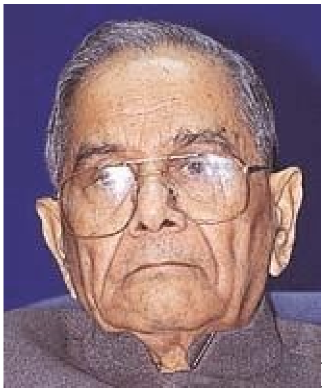
These voluntary educational associations pursued many topics of study that did not spring from practical colonial purposes, but were nevertheless closely intertwined with the colonial administration, in part because their membership at first was almost wholly comprised of East India Company employees, and their overall purpose of explicating the phenomenon of India “tinges all their productions, merging colonial and scientific motives and making it impossible to distinguish between them” (18).

Jones was one of the first scholars to advance the theory that Sanskrit and related languages of South Asia were somehow related to certain languages of Europe, and even today, there is no substantial argument against the view that linguistic and historical evidence supports the existence of some kind of an IndoEuropean language family. In short, Jones proposed some kind of entry into India from outside to explain the relationship between the languages of India and Europe. This theory still has many adherents, but the details


S.P. Gupta

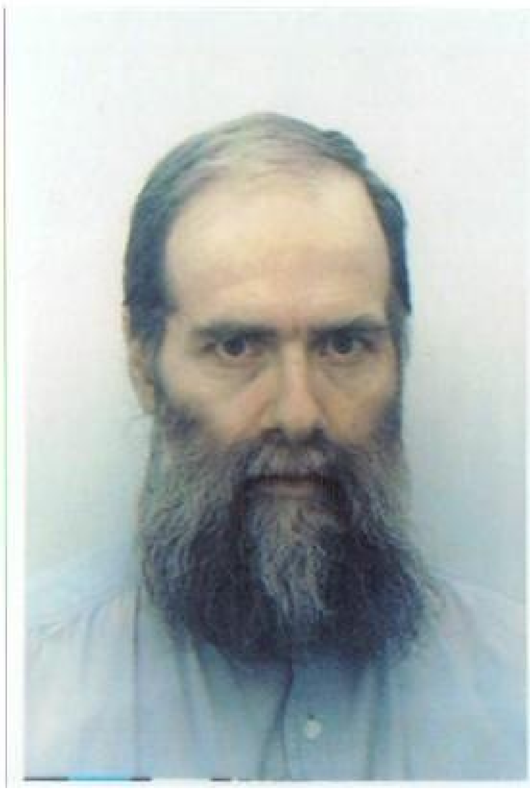
his extension of finding common origins in the Indo-European language family to assertions of common biological origins, viz., an Indo-European people, Sir William Jones laid the groundwork for what have become known as the Aryan Invasion and Aryan Migration Theories.

By the second half of the nineteenth century, Indologists no longer held to the primacy of the Bible for interpreting Oriental texts or estimating the world’s age. Following in Jones’s footsteps was esteemed

**B.B.Lal**

about that IndoEuropean language family and the proposed “entry” remain hotly disputed, leading to multiple theories, some of which we will discuss in the followings.

The Aryan Invasion Theory and Discovery of the Indus Valley Civilization: In

**Koenrad Elst**



Sanskritist Friedrich Max Müller, born in 1823 in Dessau, Germany, and an immigrant to England at the age of twenty-three. Max Müller soon became a towering figure in the new field of comparative philology in the mid- to late nineteenth century. Although he never visited India, he was well known there in his own time and he enjoyed celebrity status in Europe until his death in 1900. Max Müller’s work helped lead to the general consensus in the late nineteenth century that the first speakers of an Indo-European language, termed by the new comparative philologists as “proto-Indo-European,”

comprised an ethnic

Shereen Ratnagar
group called the Aryans.

The choice of the contested term “Aryan” stemmed from the finding in Sanskrit of the word “arya” that occurs reflexively to describe the peoples who honored the Vedas and their rituals, and findings of the same term used in other early Indo-European language sources, par

ticularly in the Iranian records, whose authors also extolled their own community as “arya.” According to most, the term “arya” as an adjective connotes ‘honorable,’ or ‘civilized,’ thus as a noun it connotes those who are most ‘honorable’ or ‘civilized.’

Nineteenthcentury comparative philologists asserted that the languages of the South Asian subcontinent fall into three distinct language families: the “Indo-Aryan” branch of the Indo-European family and two non-Indo-European language groups - the Dravidian, and the Austroasiatic Kolarian or Munda languages. In keeping with the midnineteenth-century fascination with race, Max Müller took the concept of the “arya” a step further by positing the notion of an ancient Aryan “race” that explained why some Indian philosophy and practices were so civilized - after all, he could see many similarities to the rarefied behavior of Europeans in the colonized South Asians, who were themselves no barbarians.



Romila Thapar

Based on the interpretation of linguistic and literary evidence from the Vedas by Max Müller and others, which asserted an Aryan racialized identity, the delineations of the two other language groups were also read in a highly racialized manner, and a Dravidian race was postulated. Max Müller assigned the composition of Vedic literature to 1200-2000 BC, a dating later taken up by scholars in multiple fields. To him, these dates for the earliest Sanskrit texts signaled the beginning of the Aryan migration into the South Asian subcontinent. The Aryans, repre sented by the Sanskrit-speaking composers of the Ve das, interacted with, and some may have intermarried with, the people of the Greater Indus Valley.

The search for

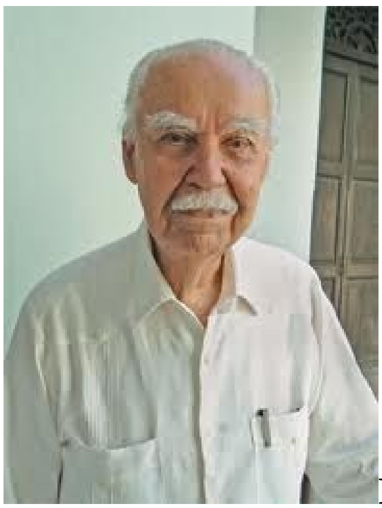


the Aryan homeland abandoned Biblical **D.N. Jha** formulations and came to be informed instead by the new enterprise of com parative linguistics. The methodology of this discipline con sisted of building up the vocabulary of the hypothetical proto Indo-European lan guage by studying what was common in the different Indo European languages.

In the creation of mul

**Rajesh Kochhar**

tiple inferences, the
consensus crystal
lized around the view that Aryans were originally pastoral nomads, since the hypothetical vocabulary that they created included many words for domesticated animals, but fewer words for cereal grains. In trying to identify the homeland where

**Ram Sharan Sharma**



Suraj Bhan

the nomadic Aryans might have emerged, scholars sought to find where they could have practiced nomadic pastoralism, in particular, where there was evidence of the horse, since the Vedas contain multiple equine references. Various widely separated places for the Aryan homeland were suggested, ranging among northern Europe, Anatolia, Southern Russia, and the Caucasus, but importantly, the Indian subcontinent was not identified as the potential homeland for the IndoAryans. It was widely believed that the first speakers of Indo-European languages in Pakistan and India must have come from outside.

The discovery of the Indus Valley Civilization, with its major sites of Harappa and Mohenjodaro, is also firmly embedded within South Asia's colonial past. Among its achievements, the Asiatic Society can be credited with increasing interest in archaeological finds across the South Asian subcontinent.

This story has been told by many researchers and consolidated in Volume III (*Harappan Civilization - The Material Culture*) of this series.

The Indus Civilization was discovered at a time when Max Müller's civilizational history of South Asia was presumed by scholars to have begun with the "Aryans" and their "Vedic Age." The dating for the Vedic period, set *ca.* 1200-600 BC led to the view that the Indus Civilization was "non-Aryan." Marshall's view of the civilization at Harappa and Mohenjo-daro was that it had a long antecedent history prior to the advent of Aryans in the region. By contrast, Sir Mortimer Wheeler, the last Director-General (1944-48) of the colonial Archaeological Survey, proclaimed his own innovative theory of diffusion. According to Wheeler, in the third millennium, the sites represented by the Indus Civilization learned the idea of city-life and civilization from Mesopotamia.

Wheeler's theory of "stimulus diffusion" from the West was based on evidence that there was extensive trade between the Indus Valley, Mesopotamia, and Elam during the third millennium BC. Importantly, Wheeler challenged Marshall's view that the urban civilization of the Indus Valley had long faded by the time the so-called "Aryans" entered the Indian subcontinent. He proposed instead what has become the basis of the Aryan Invasion Theory: "invading Aryans" had massacred the population of Harappa and Mohenjo-daro, putting an end to the Indus Civilization, and to support this assertion he offered an imaginative narrative about the skeletal remains at Mohenjo-daro.

The Aryan Invasion Theory posited that the South Asian civilization was predicated in part upon the clash of "races." Aryans were the invading, light-skinned, Sanskrit-speaking, and civilized pastoralists. As they entered the Indus Valley from the West, they encountered the indigenous, dark, and per Vedic texts savage *Dasyus*, commonly but inaccurately identified as the Dravidians. Further, the formation of the caste system emerged in part due to this encounter. Some Aryans of the Vedas sought to keep themselves "pure," and refused to intermarry; others also did so, but needed to be categorized differently. These practices contributed to the formation of the caste system. This colonial formulation, achieved through new reading of Vedic texts, has proven remarkably "durable" (19).

The Aryan Migration Theory, the Out of India Theory, and the Indigenist Theory: Although the Aryan Invasion Theory can still be found in various sources that draw on early works (including, unfortunately, some school textbooks), it has long been abandoned by critical scholars. There are, however, writers who still campaign against the Aryan Invasion theory and continue "flogging a long-dead horse" (20), a remark whose humor is derived from the equine emphasis in the Vedas.

The Aryan Invasion Theory's version 2.0 is commonly known as the Aryan Migration Theory. This theory holds that speakers of Indo-Aryan (the presumed predecessor of Sanskrit) entered the subcontinent in one or more migrations rather than as violent invaders. In this model, the relation between the different branches of the IndoEuropean family is linguistic; race does not underpin the theory. Proponents hold that the Indus Civilization declined for other reasons (variously debated) and that the Aryans came into India when there was little to no urban civilization left. The Aryan Migration Theory is held by many mainstream scholars who believe the evidence shows that peoples speaking Indo-Aryan entered South Asia as a branch of the larger IndoEuropean language family. Aryan Migration Theory proponents claim the modern South Asian culture is formed primarily from the cultural interaction of these Indo-European immigrants with the native peoples of the region.

The Aryan Invasion Theory and its successor the Aryan Migration Theory have both been increasingly challenged in the past several decades by proponents of what has been called Indigenist

Theories. Scholars espousing an Indigenist position hold the view that the theory of an external origin of the Indo-Aryan speaking people on the Indian subcontinent has been constructed on flimsy or false assumptions and conjectures, and they find that no compelling evidence has yet been produced to posit an external origin of the Indo-Aryans. According to Edwin Bryant, “the vast majority of the professional archaeologists I interviewed in India insisted that there was no convincing archaeological evidence whatsoever to support any claims of external Indo-Aryan origins. This is part of a wider trend: archaeologists working outside of South Asia are voicing similar views” (21).

A far more extreme view is captured in the Out-of-India Theory, also known as the Indian Urheimat Theory, a notable early proponent of which was Friedrich Schlegel (1772–1829). Today, Outof-India theorists Koenraad Elst and Shrikant Talageri carry on the viewpoint that the IndoAryan Vedic culture is not only native to South Asia, but that the origins of the entirety of the Indo-European culture were also native to South Asia. In this view, the “Indo-Europeans” expanded out of India into what is now identified as the IndoEuropean linguistic and cultural area.

Hindutva: There are numerous works that investigate the implications of a racialized understanding of the Aryan in the Orientalist encounter with Vedic texts. Sheldon Pollock, for example, demonstrates how German Orientalist analysis of Indian Vedic lore profoundly informed Germany’s national consciousness by furnishing a raciallybased, Indo-European myth of the pure Aryan race. Pollock suggests that the authoritative power of the Aryan discourse had been applied in Europe to create a powerful “internal narrative” in the construction of a German national consciousness, and ultimately was used by National Socialists in the colonization and domination of Europe itself. This myth also helped to distinguish the Semites as “non-Aryan” and to justify their extermination (22).

It is unsurprising that some “Hindus” could draw on the racialized view of the Aryan for parallel purposes. Evidence suggests that as early as the sixteenth century AD (and possibly even fourteenth century AD.) some people referred to themselves in a religious sense as “Hindus,” although its meaning was not particularly clear (23). The term Hindu was adopted by the British to characterize all things in India, especially elements and features found in the cultures and religions of India, that were not Muslim, not Christian, not Jewish, and hence, not Western.The use of the term “Hinduism” appears in the early nineteenth century, and by the last quarter of the nineteenth century, both Indian nationalism and a panIndian Hinduism had emerged. Both Indian and Hindu are etymologically derived from the same word, leading some to conflate the two, merging territory and religion.

The construction of Hinduism as a unified, protean “world religion” defined by its tolerance and vague spirituality was accompanied by the rise of a nationalist consciousness in South Asia since the nineteenth century. The modern nationstate, although itself an imperial product of European sociopolitical and economic developments from the sixteenth century onwards, came to be embraced by nineteenth-century Hindu nationalists, who fought vehemently against British imperialism and who accepted the homogenizing concepts of “nationhood” and “Hinduism.”

The term “Hindutva” has been used since at least the 1920s. In 1923, V.D. Savarkar’s pamphlet *Hindutva: Who Is a Hindu?* offered a religious and cultural definition of Hindu-ness, which he called Hindutva. Savarkar’s Hindutva was comprised of territorial, political, nationalistic, and ancestral components. A Hindu was “a person who regards the land of Bharatvarsha (the Indian subcontinent) from the Indus to the seas, as his Fatherland as well as his Holyland” (23). Hindus also shared roots in the Hindu or Aryan “race,” or jati, and they were joined both culturally (following a Sanskrit-based

culture, i.e., Hinduism, Jainism, Sikhism, and Buddhism), and religiously (as followers of Hinduism).

In Savarkar's definition, a person could not be a proper Indian unless they were "Hindu." All Indian non-Christians and non-Muslims were automatically counted as Hindus, even the aboriginal tribal populations, but Muslims and Christians could be Indian only if they racially, ethnically, culturally, were originally "Hindu." Savarkar's notion of Hindutva sought to enable new nationalists to regain a united, continual Indian ("Hindu") identity, based on Arya-hood and "Aryan" beliefs. All could be proud to reinstate that golden age characterized as Ram Raj, the Hindu god-king Rama's realm.

Embracing Savarkar's message was the RSS, or National Volunteer Organization, also known simply as the Sangh. The RSS was founded in 1925 and led by Keshava Baliram Hedgewar (1889-1940), originally from Nagpur, Maharashtra, and next by famed Hindu nationalist Madhava Sadashiva Golwalkar, also from Nagpur, Maharashtra. Although ostensibly rejecting antiSemitism, Golwalkar is famous for his frank admiration of Nazi efforts to maintain their racial and cultural purity, stating plainly that their efforts were a "good lesson" for his followers in understanding how to proceed to effectuate Hindutva. Golwalkar accepted Savarkar's theories of Hindutva and extended his arguments by denying any immigration of the "Aryans" into the subcontinent in his 1939 work, *We, or The Nationhood Redefined*. Golwalkar, rejecting the notions of racialized "Aryans" appearing from outside India, stressed that the Hindus have always been the indigenous children of the soil. This open concept of the "Hindu" was instantiated in the modern Indian Constitution, which classified all Buddhist, Jains, and Sikhs as "Hindu" in Article 25 [2].

After a person linked to the RSS assassinated Mahatma Gandhi, the organization was largely pushed underground. However, beginning in the 1960s, a resurgence of interest in the RSS emerged as greater dissatisfaction with India's reigning political parties grew. By the 1980s, the Indian National Congress, which had held power almost without interruption since Independence, was no longer associated with the triumphs of anti-colonialism but was instead seen as a corrupt government that sought to buy votes by creating quotas for scheduled castes and ignoring the increasingly disaffected middle class. Hindu nationalist groups such as the Bharatiya Janata Party (BJP) and its allies became the beneficiaries of this widespread disenchantment with the nationalist traditions of Gandhi, Nehru, and the Congress Party. Many voters had accepted the concept of a Hindu Raj as a welcome alternative both to the Congress and to its Marxist rivals. The widespread animosity of the general Hindu public to Pakistan also played a prominent role.

Hindutva and Pseudoarchaeology: A spate of excellent works have appeared since the 1980s and 1990s that demonstrate numerous instances in which Hindutvadins have improperly used archaeology and appeals to "mythistory" to further their political goals. In particular, scholars quickly turned to examine the 1992 eruption of violence in Ayodhya - the mythical birthplace of the Hindu god-king Rama - inspired by a series of Hindutva-charged events beginning in the 1980s and ramping up especially between 1989 and 1992.

Turning more directly to the Indus Civilization, Irfan Habib exposed a clear case of pseudoarchaeology in his 1997 essay. He provided examples of cover-ups and deliberate reinterpretations by Archaeological Survey of India's head archaeologist B.B. Lal, for example, to portray an Indian history appealing to Hindutvadins. Further, editors of Puratattva, the Bulletin of the Indian Archaeological Society, began to publish contributions of questionable worth, including a paper by Navaratna S. Rajaram that claimed that the RgVedic Age ended ca. 3730 BC; the Mahabharata

War occurred, *ca*. 3100 BC ; the Indus culture corresponded to the age of the Brahmanas and Sutras; and, finally, the Age of Chaos came ca. 1800–900 BC. Compounding the problem was the refusal by these archaeologists and Vedic scholars to use carbon-14 testing despite seeking to date certain sites far older than has been generally accepted.

Suraj Bhan (24) demonstrated how S.R. Rao vainly searched for Vedic evidence in the Harappan site of Lothal (e.g., fire altars, animal sacrifice, and the horse). He revealed how B.B. Lal and B.K. Thapar reported the discovery of " fire altars" and "sacricial pits" in the excavation of Kalibangan in the 1960s, but without clear evidence. Further, Bhan showed how the desire to find the Saraswati River to be the main center of Harappan Civilization rather than the Indus River had led to confusion being fomented in archaeological literature by pseudo-scientific efforts.

Bhan noted that in the 1980s, communal forces in Indian politics had begun to lend their support to the propagation of the myth that the Harappan culture was in actuality identical with RgVedic culture, and by December 1993, many members of the supposed scientific elite came to participate in symposiums on the Aryan problem in Indian history. Building on top of each new "discovery" - the newly found Vedic Saraswati River, excavation of a chain of Harappan sites along this lost river track, discovery of the archaeological remains of "Vedic altars" connected with Vedic sacrifices at Harappa, and the "nearly complete decipherment" of the Harappan script by many scholars as a language of the Sanskrit family - all purportedly established the "full identity of the Harappan Civilization with Vedic civilization," leading to the necessity of demanding "a reexamination of Aryan Race and Invasion Theory" (24).

Bhan warned against polemical works such as the 1995 book by Navratna S. Rajaram's *Politics of History*, which seeks to emphasize that there was no Aryan movement into India, but rather that the Indian Aryans migrated into Iran, Mesopotamia, and Europe after 1900 BC. And too from "India". Bhan surmised, "Archaeology in India is seriously in danger at the hands of commercially and politically motivated nonprofessional zealots. It has to be saved and salvaged in the interest of the scientific understanding of our past."

Scholars in Fagan's 2006 book, *Archaeological Fantasies: How Pseudoarchaeology Misrepresents the Past and Misleads the Public*, have identified major characteristics that are said to distinguish pseudoarchaeology from scientific archaeology, which can be used to help guide us in the process of salvaging the scientific understanding of archaeology in India and Pakistan: 1. Pseudoarchaeology proceeds from the assumption that civilizations, like human beings, have family trees, and that the earlier cultures in effect beget the later. In the case of significant achievements, such as the building of pyramids, it seeks to determine priority with certainty and to proceed from the assumption that every great invention or idea can have occurred only once in human history and is spread or diffused from that one source.
2. Pseudoarchaeologists set out to confirm, rather than to test, a hypothesis, they do not try to account for all the available data but rather to seek out data that support their initial assumptions. 3. Whenever possible, they employ apparently new, previously untested methodologies that appear to give the results they desire.
4. Pseudoarchaeologists are contemptuous or dismissive of traditional methodologies and procedures (unless they conform to their needs). 5. They appeal to the imagination of their readers by suggesting that their findings have a wide application and significance (25).

In his own contribution (*Rama's Realm: Indo-centric Rewritings of Early South Asian Archaeology and History*) to the Fagan volume, Michael Witzel energetically describes the "wave of indigenously minded revision and rewriting of its archaeology and history that manifests itself at all levels of society: in scholarly publications, in the press, on the Internet, and in government publications, policy statements, and administrative actions" (26). Witzel explains, "the revisionists' guild also includes a number of scholars and writers who do not openly espouse the Hindutva line. However, as we will see, the Golwalkar Savarkar tenets have now sunk so deeply into the public, political, and even scholarly discourse that their fundamental principles ("one realm, one people, one culture") appear regularly, even if sometimes in an imperfect and unconscious fashion." Witzel recognizes that a wide range of authors is represented, "from astrologers and bank clerks to professional archaeologists," and all "have their own peculiarities, hobby horses, and deficiencies; however, there is not the space here to go into specifics" (26).

Witzel reviews major archaeological controversies such as the identification of the Indus Civilization as Vedic; the propriety of substituting the "Sarasvati Civilization" for the term Indus Civilization; whether or not horses existed in the Indus Civilization; the resurgence of traditional religious pseudosciences; censorship of standard scholarship and elevation of mythistorical textbooks; and so on. Witzel details these vignettes as a conflict of science and reason against an essentialized opponent, whom he describes as "the revisionists," holders of the widespread view that "Indian history, as we know it, is nothing but the product of colonial (and, more recently, of 'Marxist') efforts and that it was sustained by 'colonial Indology' (thus the programmatic title of a polemical book by the Cambridge-based Indian archaeologist Chakrabarti, *Colonial Indology: Sociopolitics of the Ancient Indian Past*)". According to the revisionists, Witzel continues, "the whole scholarly field of Indology, which emerged in the late eighteenth and early nineteenth centuries (i.e., before British dominance of most of India was firmly established), is seriously tainted, if not worthy of outright rejection, especially the insistence on an early 'Aryan invasion' of India around 1500 BC."

The rhetoric of finding proof through archaeology offers means of foreclosing dissent by invoking the authority of performing 'science', although one has to appreciate that the creation and appraisal of 'scientific' evidence established through archaeological methods require an intellectual grasp on historiography, since it is historical conditions that offer excavated artifacts the legitimacy of a proof. This makes a narrative for an aspect of the past derived purely through the archaeological methodology as contingent as that acquired through other intellectual means of investigation.

Of the many unfortunate repercussions of national jingoism on interpretations related to the Indus Civilization, the absence of a coherent professional disavowal for establishing a pseudoHindu culture in the third millennium BC through 'archaeological' sources has been the most glaring. It may well be a sign of a dismissal of historical consciousness by those who are involved in the excavation of Indian 'grass roots' that they can argue on the one hand that 'the pursuit of a nationalist goal in archaeology is entirely justifiable as long as this does not bend archaeological data and is not used as an intellectual support for chauvinism', and yet suggest that 'in such multiethnic nation states as India the notion of the ancient past should not be based on the perceived and historically evolving and changing interactions, linguistic and other differences, but on the story of their interactions and common achievements' (27).

Apart from openly falsifying evidence, schemes for establishing a national consciousness through archaeology in India has involved

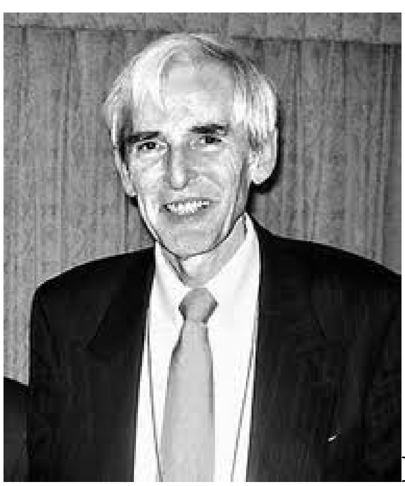
Archaeology in India is seriously in danger at the hands of commercially and politically motivated nonprofessional zealots. It has to be saved and salvaged in the interest of the scientific understanding of our past. (*Suraj Bhan*) casting slander, randomly calling western and many established Indian scholars, especially historians and indologists, colonialists, neo-colonialists, elitists and activists, and maligning their scholarship as 'simplistic, pompous' and ignorant of 'the local and regional complexities', as examplified by Chakrabarti (27), among

others.

Hindutva Notion of Indian History: It seems scarcely worth taking the effort to repeat Hindutva's nonsensical claims, but for the fact that they have been so widely and effectively propagated as Hindu history and culture by the saffron brigade. Astonishing as it may seem, this is the interpretation of the nation's history that is being perpetrated through the Sangh's network of sectarian schools and that has even infiltrated into the fabric of the country's national curriculum and textbooks

The Indus Civilization poses an immediate problem for the Hindutva view of India's history, since an ancient civilization - that is clearly "pre-Hindu" - deeply weakens the possibility of seeing Indian history in preeminently and constitutively Hindu terms. Furthermore, there is a second challenge associated with India's ancient past, which relates to the arrival of the "Aryans" from the West, most likely in the second millennium BC. The Hindutva view of history, which traces the origin of Indian civilization to the Vedas has, therefore, the double 'difficulty' of (a) having to accept that the foundational basis of Hindu culture came originally from outside India - from across the Hindu Kush or beyond the deserts of Baluchistan, or worse yet, if the Aryans were "indigenous", from Pakistan; and (b) being unable to place Hinduism at the beginning of Indian cultural history and its urban heritage.

Thus, in the Hindutva theory, much hangs on the genesis of the Vedas. In particular: who composed them? (it would be best if they were native Indians, settled in India for thousands of years, rather than Indo-Europeans coming from abroad). Were they composed later than the Indus Civilization? (it would be best if they were not later). There are, therefore, attempts by the Hindutva champions to rewrite Indian history in such


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a way that these disparate difficulties are simultaneously removed through the simple device of making the composers of the Vedic hymns also the very same people who created the Indus Civilization. This creates a new 'difficulty': The core area of the Indus Civilization, the ostensible geographic area of the Vedas, is outside India! The

solution is to mythologize the Ghaggar-Hakra River braid into the roaring river of Sarasvati and drag the Indus Civilization to the eastern banks of this Vedic river. To boot, rename the Indus or Harappan Civilization as *Sindhu-Sarasvati Sabhita* or at least *Indus-Sarasvati Civilization*! It

'......the pursuit of a nationalist goal in archaeology is entirely justifiable as long as this does not bend archaeological data and is not used as an intellectual support for chauvinism', and yet suggest that 'in such multi-ethnic nation states as India the notion of the ancient past should not be based on the perceived and historically evolving and changing interactions, linguistic and other differences, but on the story of their interactions and common achievements' (*D.K.Chakrabarti*, *2003*)

would help if we could put the intellectual origins of Hindu philosophy as well as of the concocted Vedic science and Vedic mathematics solidly into the third millennium BC, if not earlier. Indian school children are then made to read about this highly speculative `Indus-Saraswati civilization' in their new history textbooks, making Hindu culture
- and Hindu science - more ancient, more urban, more indigenous, and comfortably omnipresent throughout India's civilizational history. The problem with this account is, of course, its obvious falsity, going against all the available evidence based on archaeology and literature. To meet that difficulty, "new" archaeological evidence had to be marshaled. The central arguments, however, come from the RgVeda.

Given the priorities of Hindutva, the rewriting of India's history tends to favor internal and external isolation, in the form of separating out the celebration of Hindu achievements from the nonHindu parts of its past and from intellectual and cultural developments outside India.

This brings us squarely to the historical period of extremely high sensitivity to Hindutva: the nature of ancient India and the Hindutva assertion of an indigenous 'Aryan race'. Where does one even begin? As stated earlier, the philologist William Jones identified the connections between Sanskrit and Latin and Greek, and first proposed that they all derived from a single language, IndoEuropean. What should have remained a linguistic category was altered to that of a race in the obsessively race-conscious late 19th century. European scholars, including even Max Müller for a time, built up the idea of an 'Aryan race' that swept into India as invaders from the Northwest, bringing their language with them, and establishing superiority over, and hermetic separation from, the indigenous 'Dravidian race' through the caste system.

The riot is: the Aryan Invasion Theory is dead, the Aryan Migration Theory is dead, The *Sindhu-Sarasvati Sabhyata* is Vedic, The Hindu Civilization of India is Vedic, the Harappan Civilization is the same as Vedic civilization, and so forth.

With the growth of archaeological evidence, and supporting evidence from linguistics, the story that is emerging is not one of invasion but of gradual migration and settlement of peoples speaking an Indo-European language, following the decline of the Indus Valley Civilization. The subsequent growth of a caste system is also now regarded as having been a rather more complex process than previously thought.

In contrast to this carefully evaluated and maturing view, constantly sensitive to archaeological finds and the implications of detailed linguistic analysis, the assertion of Hindutva is simple: the Sanskrit-speaking Aryans were neither migrants nor invaders, but were indigenous to India. The ancient Harappan Civilization is regarded as part of a great Vedic Age, and the dates of the Vedic texts set so far back in time (up to 9000 BC) as to confirm that India must have been the first center of human civilization (and even of human origins), with subsequent migration of Aryan peoples into Iran. To stress the Vedic connection, the term ‘Harappan’ is now increasingly replaced with ‘Sarasvati-Sindhu’, a name with a distinctly Vedic flavor. The claim that the Sarasvati, a dried up tributary of the Indus around which many Harappan settlements have been found, was once a mighty river finds no support from the topography and geology of the region (see the next two chapters).

Needless to say, during this glorious Vedic Age, India was a land of wisdom, peace, and knowledge; a time of the profoundest discoveries in mathematics and science, and boasting a wellknit and harmonious society, with no oppression of women or of lower castes. Irfan Habib comments that since all later texts are being given exorbitantly earlier dates, and every intellectual and technological achievement pushed to an obscure, sacred past, the later times begin to appear more and more as sheer dark ages. We are being asked to believe that not only did the alleged inventors of writing in the 4th millennium BC forget to write up the Vedic texts, but their descendants too simply forgot writing altogether for a period of 1500 years or so, before the Mauryas came around. The Indians also coolly forgot the great scientific secrets embedded in their texts.

Mythmaking Around the RgVeda: Until very recently most western scholars adopted a relationship between myth and history that takes it for granted that the great majority of religious myths and secular legends contain elements of garbled history; for example, the Trojan War of Homer’s lIliad and the Biblical Exodus both really happened, even though they did not happen quite as described. Ancient historians have regularly used such presumptions as part of their evidence. The same is the case with the RgVeda. We are dealing here with a case in which an oral tradition has been treated as if it were a datable written record and myth has been confused with history as it actually happened. Some prehistorians and archaeologists working in India and Pakistan have pieced together their pictures of the cultural background of the prehistory of the Indus Valley by combining the evidence provided by archaeology with the ‘evidence’ contained in the RgVeda. The basic principle seems to be “always believe what the text says unless it is palpably quite impossible’. Almost everything that presently passes for the early history of the Indian subcontinent in Indian schools and colleges is such a reconstruction. But how valuable is this evidence and how ‘authentic‘ is this source? Some years ago, Edmund Leach wrote a thought-provoking essay about this red herring, that is, the RgVeda, in the study of prehistoric South Asia, and how these Vedic pointers have distorted the interpretations of the Indus archaeology (28).

By the time Max Muller began to work on his translation of the RgVeda around 1846, it was already being claimed that the text was extremely ancient. As early as 1865 he had already proposed a dating somewhere between 1200 and 1800 BC: “We cannot well assign a date more recent than 1200 before our era, for the original composition”, wrote Max Muller. With only slight variation, the general argument has been repeated over and over again, almost without any criticism, so that it has now become a historic dogma. Some modifications have been made recently, they range from 1000 to 1200 BC (by western authors) on one hand and 5,000 to 7,000 BC (by “Vedic scholars” of India) on the other hand. So much for the dating of the ‘unimpeachable textural evidence’.

“I find most disquieting of all the powerful expose by Michael Witzel of some current trends in Indian nationalism in ‘*Rama’s realm: Indocentric rewriting of early South Asian archaeology and history.*’The pressure to be oldest is commonly felt even in quite respectable academic archaeology - claims of the oldest city, or the oldest writing, or the oldest metallurgy are relatively common. But this turns into something much more sinister when it is used in an overt attempt to reshape national identity, sometimes for explicit political ends. What is even more disquieting is that among the straight pseudoarchaeologists, often amateurs who put together such bricolage of misrepresentations to fabricate their synthesis, there are also serious professional scholars. This is the dangerous dividing line where pseudoarchaeology, in the sense set out here by Flemming and Fagan, becomes a nationalistic doctrine, as happened in Nazi Germany, sweeping up even serious scholars and carrying them along. (*Colin Renfrew. Foreword. In: G. G. Fagan (ed.) Archaeological Fantasies. How Pseudoarchaeology Misrepresents the Past and Misleads the Public*)

As far as the argument of ‘unaltered’ oral transmission of the RgVeda is concerned, there is, of course, no genuine evidence that the text of the RgVeda existed in its present form before 1000 BC, or even 400 BC, but no contemporary Indo-Aryan scholar will admit as much. In spite of all the arguments that have been put forward in favor of the belief that the text of the RgVeda is substantially the same as the oral text that existed in remote antiquity, it would be only an act of deep and unshakable faith to believe that it is in the least likely to be the case (28). In fact, the real experience with other oral transmissions around the world dictates that it cannot be so. Oral transmissions are notoriously unreliable, they change on the flip of a coin, not only temporally but also spatially. Take, for example, the sayings and doings of Prophet Muhammad. Each *Hadith* (saying or doing of the Prophet) was supposedly committed to the memory of the faithfuls with utmost care, each *Hadith* was treated as a religious trust with the narrator, any alteration was sanctioned with the threat of Allah’s punishment, and each narrator was assured to be an upright person, with an element of virtual holiness. Still, within a period of 200 years, most of these carefully memorized and faithfully transmitted *Hadiths* were declared ‘tampered’ or ‘false‘ by the great researcher, Imam Bukhari, who put only a small number of them to writing in his famous collection. No such care, except the faith in the custodians (the narrators’ families) of the hymns is seen in the transmission of the RgVedic hymns but still scholars like Witzel accord them the status of an unaltered revelation.

Three elements in the argument are crucial. First, the hymns of the *RgVeda,* which were committed to writing around 400 BC at the very earliest, had previously survived in the form of a word-perfect oral tradition for well over 1000 years. Second, although these hymns are religious documents, they are also records of history. It was repeatedly and categorically asserted that we can infer the nature of Aryan society around 1700 BC from a close study of the *RgVeda.* Third, the history thus recorded was the history of the beginning of civilization in the Indian subcontinent. Essentially similar claims have frequently been made for the possibility of reconstructing the world of Odysseus from the pages of Homer or the world of the ancient Israelites from the pages of the Pentateuch. Only very recently have the radical skeptics in these matters begun to gain the upper hand, and it is still an open question whether skepticism or blind faith will end up victorious (28).

The crux of Leach’s counter-argument is that whatever the date of the RigVeda text may be, absolutely no grounds exist for supposing that it refers to events that actually happened in ‘real‘ historical time. Equally, it is futile to suppose that the cultural environment that seems to be postulated by the *RgVedic* texts might be identified with any ‘real‘ cultural environment that might be reflected in the excavations of archaeologists working in the Indus Valley. Furthermore, we do not know if the

environments that we extract from the text reflect those that prevailed in 1500 BC or 500 BC. We have no means to phantom the modifications, deletions, and additions, which each succeeding narrator made to the 'text', as did they surely do. All this means is that the RgVeda is at best a residue of a very early oral mythology. If it is so, then it is just as likely to derive from wandering bands of entirely imaginary chariot-riding cattle-hustlers or from the imagery of the successive narrators. It could also have been introduced into the Indus Valley at some quite indeterminate date by some enterprising Persian missionaries (28) or by some post-Harappan people themselves.

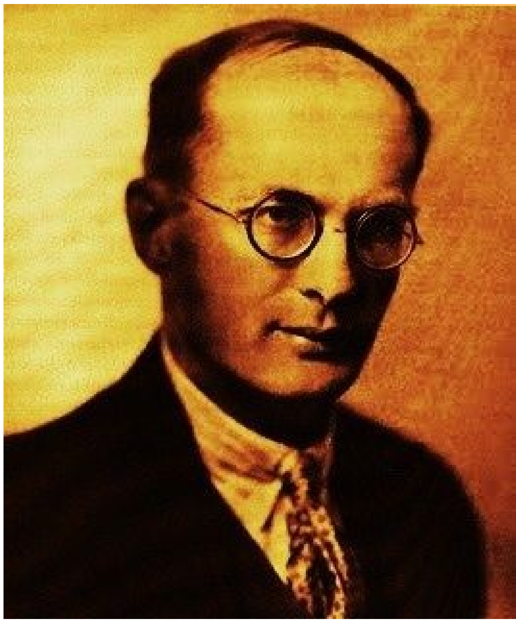
There are many other possibilities. We know that the Indus cities traded northward to Central Asia and westward to Persia, Mesopotamia, and the Arabian Sea.They would have been as polyglot as imperial Rome, contemporary Jerusalem, or fifteenth-century Baghdad. All manner of religious cults would have been found there. Yet modern scholars have repeatedly asserted that the *RgVeda* is only a slightly disguised account of an actual sequence of events, the Aryan invasions, the Aryan migrations, the Aryan conquests, the Aryan enslavement of the darkskinned *Dasas*, the Aryan dealings with the miserly *Panis*, the Aryan demolition of the Dasa's *bunds*, the Aryan destruction of Dasa's *Purs*, and the like. We also do not know what time period these hymns represent and in what region. What has been added by the Brahmins, what has been purposefully subtracted, what has been forgotten, and what has been modified?

Emond Leach is implicitly at odds with the mainstream historians: while we vehemently criticize how the Hindutva use the RgVeda as a source of unfettered truth, we the mainstreamers are equally guilty of constructing some makebelieve truths about the Indus history. For instance, it is certainly possible that this is the period when Indo-Aryan languages first became dominant in the Indus Valley, but we do not know. Moreover, even if it was the case, we cannot know why it would have happened. A rough survey of well-authenticated examples would suggest that, of the many possible reasons for a change in language distribution, political domination by a small minority is the most likely factor, while a mass movement of population is the most improbable. Are we sure that this language change occurred through the Vedic people and not through other Indo-Ayan tribes like them which infiltrated the Indus Valley before the Vedic people intruded in the Indus Valley?

Despite the enthusiastic fantasies that have been developed by Georges Dumezil and his followers, who claim that the post-Harappan Vedic society of the Indus Valley had a form of social organization that was prototypical of the organization of all the Indo-European peoples (29), nothing in the archaeological record suggests that the Indus society was radically discontinuous from its predecessor, beyond its complexity. Nor is there any independent *archaeological* evidence for a massive intrusion of 'foreigners' from the Northwest, across the Indus River. The suggestion in parts of the recent archaeological literature (30) that such evidence does exist is quite misleading. The 'Painted Grey Ware Culture' of these writers would never have been interpreted as such if they had not started out by treating the *RgVeda* as a history book (28).

Nevertheless, the Vedic texts are considered peculiarly sacred, the *RgVeda* most of all, and this state of affairs seems to have prevailed for a long time. What, then, is the mythical significance of the *RgVeda* within India? Leach asks. This question has received surprisingly little attention. Yet here is precisely where anthropologists might make a useful contribution, if only their scholarly associates would stop thinking of the *RgVeda* as a garbled history book. Yet, the rewriting of ancient history, especially the part that impinges on the Indus Valley, is in full swing in India with the Indian diaspora in the US serving its mouthpiece. The RgVeda, even the later Vedic texts, are routinely brought forth as though

they were unshakable truths and archaeology must conform to these truths if it wanted to retain its credibility. This is the basis of the garbage that is being routinely spewed in the garb of archaeology. “The Ghaggar = the Sarasvati”, “the Sarasvati = Vedic Sarasvati”, and hence “the Harappan Civilization = the Vedic Civilization” is the result. Furthermore, if “the Harappan Civilization = Vedic Civilization”, then the Hardpans must be the Aryans. Not only this, but also: if the Harappans are the Vedic Aryans, then the Harappan language


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must be Sanskrit and their religion must be Hinduism.

It is now well over a hundred years since European scholars first asserted that 3,500 years ago people in Pakistan spoke in the language of the *RgVeda.* The idea is odd in itself, since the language of the *RgVeda* is obviously religious, dramatic, and poetic rather than vernacular (28). We

would not expect to be able to learn much about the colloquial speech and everyday customs of fourth-century Britain if the only available evidence was a copy of the King James version of the Bible. But it is the regular practice of the Hindutva prehistorians to use the text of the *RgVeda* as a basis for their description of the culture of Pakistan around 1700 BC. This is at least 1200 years earlier than any written version of the text could possibly have existed.

Leach laments that this belief in South Asian mythic past as history, even garbled, ex

There is no genuine evidence that the text of the *RgVeda* existed in its present form before about 400 BC, but no contemporary Indo-European scholar will admit as much.

(*Edmund Leach*)

tends to some authoritative western scholars. For example: “In India the earliest written records so far available are the inscriptions of Asoka [third century BC], but there exists a body of earlier literature of very considerable size and variety which was composed and passed on for many centuries in oral form. This literature goes back to the oldest surviving text, the Samhita, or 'compilation' of the hymns of the *RgVeda.* A reasonable estimate of the date of the compilation of the *RgVeda* is *ca.* 1950-1300

BC, and the composition of many of the individual hymns may be expected to have extended over several previous centuries” (30). The title of the chapter in which this passage occurs is 'The Arrival of the Indo-Aryan-speaking People and the Spread of the Indo-Aryan languages'. From this we must infer that prior to about 1700 BC the population of Pakistan

spoke some quite different kind of language. It may well be so; but we cannot know. Even if the Indus inscriptions turned out to be written in some form of Dravidian or other non-Indo-Aryan language, we still would not know.

“There is no genuine evidence that the text of the *RgVeda* existed in its present form before about 400 BC, but no contemporary IndoEuropean scholar will admit as much. If you ask such a scholar for his or her evidence (as I have done on several occasions), you will find that the answer is simply a slightly tidied-up version of what Max Muller said in 1878”, Emund Leach summarizes (28).

“But this is *not* the point at issue in my present paper. I am fully aware of all the arguments that have been put forward in favor of the belief that the text of the *RgVeda* is substantially the same as an oral text that existed in remote antiquity. I do not myself believe that this is in the least likely to be the case, but that is irrelevant. The crux of my argument is that whatever the date of the *RgVeda* text may be, absolutely no grounds exist for supposing that it refers to events that actually happened in 'real' historical time. Equally, I consider it futile to suppose that the cultural environment that seems to be postulated by the *RgVedan* texts might be identified with any 'real' cultural environment that might be reflected in the excavations of archaeologists working in northern India” (28), Leach further contends.

Negotiating Evidence: History, Archaeology and the Indus Civilization: Hindutva scholars are in the habit of quoting isolated archaeological discoveries as proof for their position and several authors have attempted to counter this misleading propaganda in specific instances. Sudeshna Guha (14), on the other hand, has chosen to tackle the broader issue: Is archeological evidence, collected under a declared policy of ‘claiming the past’ is reliable and is such evidence as nonnegotiable as is generally portrayed by some state-sponsored archaeologists? As Leach has based his analysis of mythmaking in the Indus Valley on the RgVeda, Guha makes her point on the basis of archaeological interpretations. Echoing Ucko (31), she points out that in situations where archaeological enquiry has been conducted through state agencies, one finds instances of fieldwork organized to create a positivist and predetermined outcome of the excavated material. In such cases, material evidence is usually presented as having been objectively extracted through the employment of precise excavation techniques. Where archaeological work has been directly organized to meet political ends, excavation, even when undertaken in controlled environment with sophisticated implements, has not necessarily altered the premise of enquiry.

History of archaeology is replete with such examples and several book-length (32,33,34,35) surveys of literature published since the 1990s have shown instances where archaeology has been systematically used to situate ethnic identities for prehistoric groups, define racial types from excavated artifacts, promote research on ethnogenesis, and impose legendary places on maps of modern states (14). The demolition of Babri Masjid in India and the attempts to show that the mosque of Al-Aqsa in Jerusalem was built over the temple of Solomon are only two modern examples.

Therefore, the selection of archaeology to legitimize the politics of Hindutva has not come as a surprise. For, compared to other disciplines in the humanities, and history in particular,

archaeology's investigative techniques, of which many are science-based, can effectively be evoked for cultivating the notion that archaeological methodology is truth-making. However, a growing trend within the community of professional archaeologists in India to present their evidence as being of a nonnegotiable nature, is a new development (14).

Chakrabarti is one who unabashedly supports the undeniable archaeological proof and seems to ignore the polysemic nature of truth, or indeed how factoid get privileged as facts (36). His implicit assertion that archaeological proof is nonnegotiable, is at odds from the way material evidence has often been presented in the past by practitioners themselves. It is worth our while to recall that while offering his proof for a 'pre-Aryan' religion in the Indus Civilization, even an English Director General of the Archaeological Survey of India, Sir John Marshall, who was firmly rooted in the British empiricist tradition had noted that "to assume that this evidence represents the sum total of the religion of the jungle tribes [is as] irrational as to suppose that the rude grass-and-mud hovels of these tribes are representative of the massive edifices of Mohenjo-daro and Harappa" (37).

Through a historiographical sketch of the early archaeological work on the Indus Civilization, which is being increasingly appropriated to contextualize a subcontinental ethos for 'Indian history' (27,38), Guha has drawn attention to something obvious, namely the contingency of archaeological evidence. She highlights how different meanings have been, and can be, attributed to the same set of excavated artifacts, and stress that archaeological representations need to be cautiously used as an instrument of rationalization in the creation of histories.

The very definition of an artifact rests on its associations with other objects, as well as contemporary perceptions of what its functional characteristics may be. Therefore, facts can only be established through reasoning, which makes the archaeological method analogical, and not empirical. She also demonstrates that dramatic discoveries through archaeology usually follow earlier scholarly efforts (one cannot dismiss the fact that even Harappa and Mohenjo-daro were 'found' and known before they were excavated), and artifacts unearthed during such feats acquire


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the legitimacy of proof only through subsequent interpretations. The veneer of unexpected finds may retain the romance in excavations for those who are students of archaeology and professionals in the subject, but a history created through claims of unexpected finds can only lie about its own genealogy, as magical discoveries seldom establish phenomena that are self-evident (14).

Aryan Harappans: The interpretations that are today aggressively offered as evidence for a 'Vedic' presence within the Indus Civilization (see the next chapter), demonstrate the extent to which ideologies infiltrate definitions for artifacts. The new genre of archaeological evidence challenges

their creators' slogans that 'facts of history cannot be altered' (1). By providing a known phenomenon with a new name (e.g. the *Sindhu Saraswati Sabhyata* for the *Indus Civilization*), by choosing a set of excavated and explored objects to argue for the presence of a cultural tradition that can supposedly be traced to the RigVeda, and by liberally translating this Veda to demonstrate that archaeological and literary sources reveal an unbroken genealogy for the Hindu Arya, they are establishing a foundational myth.That these are precisely the techniques commonly employed for altering perspectives in history, they deliberately ignore (14).

In recent years, some Indian excavators of "Harappan" sites have increasingly flaunted their expertise of the Sanskrit language and scoured references from the Vedas to identify their finds. For example, the excavator of Dholavira, Bisht (39) proposes that the three major architectural forms ostensibly found there, the citadel, and the middle and lower towns, could correspond to references in the RgVeda for units of a tripartite settlement system, the *parama* (highest), *madhyama* (middle) and *avama* (base), that according to him alludes to the functional hierarchy of habitations within the Vedic grama or village. This 'evidence' of social stratification was then used by other archaeologists, such as Dhovalikar, to prove that the Harappan society was indeed based on caste system of later Hinduism as he attests to a fourfold habitation divide, reflecting to the four *varnas* of later Hinduism. The skeleton of 'horse' (40), terracotta objects understood to represent spoked wheels, chariots, and armors (38), presumably 'found' over the last two decades from sites such as Surkotada, Kalibangan, and Banawali, are being offered to substantiate the argument that the Aryans peopled this civilization, although it is quite clear from sources linguistic and anthropological, that the latter are biologically nonexistent (41,42,43). Just one example of how wrong a biological classification for the Aryan can be is the retort for the claims of the Brahmanas, that they were the best *varna*, in the Pali canon's *Majjhimanikaya*:

"What do you think about this, Assalayana? Have you heard that among the foreigners in Western kingdoms (the region, which is now Pakistan) and the Kambojas (now Eastern Afghanistan) and other bordering communities there are only two *varnas*, *arya* and *dasa*; [and] having been *arya* one becomes *dasa*, and having been *dasa* one becomes *arya*?"(40).

Considering the manner in which the *RgVeda* is being currently translated by some Indian archaeologists, it is rather ironic to recall that the first excavations in Harappa and Mohenjodaro allowed the excavators precisely the opposite option: to neglect literary sources and establish evidence for an urban and hierarchical society through assemblages of artifacts and explored landscapes alone. For by 1925, it was widely assumed that the sites belonged to an era before the period described in the *RgVeda*, as the material remains did not seem to reflect the pastoral nomadic lifestyle, then accorded as being referred to in the text. The comments of Marshall, under whose leadership the excavations at Mohenjodaro and Harappa were conducted during the 1920s, that the sites produced "an entirely new class of objects which have nothing in common with those previously known to us, and which are unaccompanied by any data that might have helped to establish their origin and date"(45), set the stage for drawing inferences from outside the Indian subcontinent to explain this bronze-age phenomenon.

Mohenjo-daro and Harappa offered the authentic evidence for certifying the historicity of the Indian subcontinent before Alexander's invasion. For, compared to India's literary tradition which was classified by western, and mainly British, scholars to be 'of the religious kind' and from which 'historical facts' had 'to be collected laboriously, bit by bit' (46), archaeological finds were deemed

infinitely more reliable as historical sources. Although by the late nineteenth century 'the labors of the Sanskrit scholars' for promoting progress in Indian archeology was usually acknowledged, the skepticism with which indigenous texts were received as being of historical value is best revealed through the observations of the Governor of Bombay, Mountstuart Elphinstone, on the 'state of the Hindus at the time of Manu's code.' He wrote:

"As the rudest nations are seldom destitute of some account of the transactions of their ancestors, it is a natural subject of surprise that the Hindus should have attained to a high pitch of civilization without any work that approaches to the character of a history . . . the fragments which remain of the records of their transactions are so mixed with fable, and so distorted by a fictitious and extravagant system of chronology, as to render it hopeless to deduce from them any continued thread of authentic narrative". This is exactly what Leach wants to say in the above and this is what al-Bīrūnī said in the eleventh century.

Elphinstone's sentiments were fully echoed in the early twentieth century by Vincent Smith and was foundational to the classificatory scheme he adopted for organizing his sources, or 'the original authorities for Indian history' to write *The Oxford History of India*. But paradoxically, the confirmation of a prehistoric civilization through archaeology endowed the subject with a seminal role in substantiating evidence for the aryanization of India. As Edmund Leach commented, "rather than scrap all their historical reconstructions' and start from scratch after archaeologists started to turn up evidence of the Indus Civilization, "scholars in question managed to persuade themselves that despite appearances, the theories of the philologists and the hard evidence of archaeology could be made to fit together" (28).

Religion: The same set of artifacts that Marshall selected to base his evidence for "the religion of the Indus people" to be a "linear progenitor of Hinduism", has been offered by Gupta to demonstrate that the religion was indeed 'Vedic-Hindu' (7). The distinction between Marshall's hypothesis and Gupta's terminology may seem trivial at first, as both trace elements of Hindu religious traditions back to this civilization. However, there is a clear ideological divide between the two, which even Gupta has failed to notice while pointing out similarities between his views and those of Marshall. Marshall regarded the seal depicting the 'prototype of the historic Siva', the 'Great Bath', and the finds of aniconic objects, terracotta figurines of women, and representations of objects of worship and ritual on seals, as 'the only authentic and contemporary evidence . . . of the religious beliefs of the preAryans' which he suggested was external to the main tenets of the Indo-Aryan religion. Unlike Gupta, Marshall saw in the Indus religion aspects of the 'primitive' religion of India's indigenous 'jungle tribes' and suggested that some of the features were absorbed into Hinduism in later times.

Compared with Marshall's informed guess, Gupta's terminology of the Vedic-Hindu appears not only vacuous, but is also misleading. His choice, prompted by his thesis that everything about the Indus Valley was indigenous to the Indian subcontinent (7), reveals his unwillingness to recognize a well-documented phenomenon, that Hinduism is an organic religion, which has changed (and is still changing) in its nature and form through time. Gupta's Vedic-Hindu is simply another projection of the many colonial constructions of ancient India, where the Hindu, and particularly the Brahmanic, religion was identified as a singular faith with a concrete form, perceived as having remained unchanged and static through time, and understood as having dominated the cultural traditions of the majority living in the northern part of the subcontinent before they were invaded by the 'Mohamedans'.

The continuities in religious practices from the Harappan to the early historical period that are traced by Gupta and also those who stay away from his brand of Hindutva history, such as D.P. Agrawal (47), include the entire corpus of the Vedic, Brahmanic and Saivite religious traditions. Are we then to infer, on the basis of the suggested religious roles for the artifacts, that all these traditions were germane within the Harappan religion and have ‘evolved’ from the third millennium BC.? Lal writes of Harappan women wearing *sindur* (red ochre or vermilion) in their *maang* (hair partition) (48) finds the *Pancatantra* stories of ‘the thirsty crow and the cunning fox’ in painted pots from Lothal (49), and informs us that people in Kalibangan cooked on clay *tandoors* (48), gathers his evidence from regions as distant as Baluchistan and Gujarat to justify his belief that ‘there is no walk of life’ (presumably in presentday India) ‘where we cannot discern the grassroot features of this ancient civilization’ (48). Lal however makes it difficult for us to ‘assess’ his evidence ‘with an open mind’ as he forces his objects, selected from different geographical distances and chronological time scales, to narrate evolutionary sequences of cultures and traditions of the ‘grass roots’. And yet, it is his evidence that is being enshrined in *Ancient India* (50), the book currently subscribed for schools in India.

The Sarasvati: One finds cruder instances of the ways in which archaeological evidence is being tailored to condition knowledge. A glaring example is the material proof currently offered to establish the boundaries of a river Sarasvati within or near the boundaries of modern India. The reference to this river can be found in the *nadistuti* hymn which appears in a chronologically later mandala, i.e. the tenth, of the *RgVeda*. The archaeological evidence, now being presented to situate the Vedic Sarasvati on the boundaries of the Indo-Pakistan border, is largely based on speculations that were published in the 1980s, viz., that a river system ran parallel to the Indus during the third millennium BC, and was drained by, among others, three rivers, the Sutluj, the Yamuna, and the ‘lost’ Sarasvati. These now flow into the Gangetic system (51). The physical evidence for this river system, the Ghaggar-Hakra, was established through maps of Landsat images taken during 1972–7, and remote-sensing the courses of three palaeo-channels which were observed on these maps. It was also asserted at that time, that tectonic events in the Himalayas could have changed the courses of the rivers Sutlej and Yamuna, and caused the Sarasvati (and subsequently a part of the entire river system) to dry up (52). Rivers known in Pakistan today as the Hakra, Nara, Waihinda, Raini, and in India as the Ghaggar (which one also finds interchangeably mentioned as the Drishadvati and Saraswati within the Indian territories), were theoretically accepted as being original to the lost and partly dried up river system.

However, even before this ‘evidence’ was collated, the Saraswati had made its appearance within the Indian territories as an extension of the Chautang, on maps illustrating the distribution of Harappan sites, and in drainage systems for the northern region of the Indus Civilisation (53). Many excavators had also speculated on its flow (54) Kenoyer and Possehl also accept this geography, believing that the ‘archaeological data supports the textual information that proclaims the ancient Sarasvati as a great river with many populous settlements along its course’ (55), and that ‘the Sarasvati began to dry up at the beginning of the second millennium, but that seems to have taken a lot of time’ (56). They have not as yet speculated on its exact course from the source to mouth. We come the Sarasota question in Chapter V.3 with some details.

So, it is not a coincidence that the launching of an archaeological campaign from the late 1990s that demanded a public recognition for the physical existence of the Vedic Sarasvati running parallel to the Indus and towards the boundaries of modern India, has juxtaposed the hardening of Hindu politics.

By corroborating inconclusive geomorphological observations with the *nadistuti* hymn, relegating the chronology of the entire *RgVeda* to the fifth and the fourth millennium BC, and thereby seeking chronological overlaps between the ‘RgVedic age’ and the Indus Civilization, Lal has demonstrated that ‘the *Sarasvati Flows On’* (48). Others have sought to show that the distribution of ‘Harappan’ sites is concentrated mainly on the now dry channels of the Ghaggar Hakra, and in offering their proof that the latter is the physical relic of the RgVedic Sarasvati weave the tautology that “the vivid description of the Sarasvati as a perennially flowing, mighty and most sacred river in the many hymns of the *RigVeda*, and the largest concentration of Harappan sites on the Ghaggar-Hakra course, clearly establish that the *RigVedic* Sarasvati and the present Ghaggar-Hakra are one and the same river, as has been argued by many geographers, geologists, historians, and archaeologists for more than a century” (57).

The success of the involved archaeologists to make this ‘mighty’ river flow once more in India is best exemplified in the initiative taken by the Bharatiya Janata Party in October 2003, to develop ‘The Sarasvati Heritage Project’, and it is not surprising that the Directorship of the project has been offered to an archaeologist. Different opinions, which needless to say are intellectually sound and relate to the ambiguities that are inherent in the textual references and in the geographical location of the ancient palaeo-channels (58,59,60), are denounced by many Hintutva archaeologists as being mere “assertions of western linguists and historians and their more vociferous Indian counterpart that the *RgVedic* Sarasvati was the Helmand of Afghanistan” (48). However, the geographical extent of the Indus Civilization is over a million sq km (56), the chronological span of the so-called mature and urban phase itself is over a thousand years, and reveals vastly differential increments of development within the associated regions that are also vastly different in terms of their physical extent and material contents. To impose another category, in this instance the *Sindhu Saraswati Sabhyata*, neither refines the existing strategies through which artifacts associated with this archaeological phenomenon have been interpreted throughout the twentieth century, nor offers any framework for extracting better histories on early India.

Iran Habib has written an excellent essay on how the evidence for the Sarasvati has been develop (59). We extract a part from this incisive essay in Chapter V.3. and supplement it by the results of the groundbreaking research by Giosan et al that seems to settle the issue of the Sarasvati to the total displeasure of the Hindutva lobby (61).

Sudehna Guha concludes her essay, from which the above has been largely extracted, as follows: The nationalistic jingoism that has clearly dictated the archaeological manufacture of an indigenous ‘*Sabhyata*’, has made significant inroads in the Indian archaeology of the Indus Civilization throughout the twentieth century. The finds of a prehistoric civilization comparable in richness and scale to ancient Mesopotamia and Egypt had initially stoked national pride within British India, and Marshall’s attempts at restricting its publicity to the foreign (and British) media was received by a sharp response from the Indian press that had reasonably asked him ‘to whom does the credit of pointing out the real importance of these excavations go to the officers of the Archaeological Department, or to scholars and antiquarians abroad? The demi-official letters between Marshall and Banerji in February and March 1925, articles which appeared in the Indian newspapers during the latter half of 1924, and parliamentary questions raised by Indian members of the Council of State in January 1925, offer a glimmer of the nature and extent of the conflict between Marshall, the British Director-General, and his Indian officers. Their aspirations to publicize their own past was severely thwarted through Marshall’s dictatorial control of the colonial bureaucracy within which they

worked. The intense explorations to locate sites related to the Indus Civilization along the Ghaggar-Hakra, mostly by the Archaeological Survey of India immediately after Indian independence (from the 1950s through the ‘70s), although ostensibly following Sir Aurel Stein’s explorations in 1942, were to a large extent initiated by a patriotic zeal to compensate for the loss of this more ancient civilization by the newly freed nation; as apart from Rangpur (Gujarat) and Kotla Nihang Khan (Punjab), the sites remained in Pakistan. Subsequently, the divisive politics of India and Pakistan has prevented archaeologists in both countries from working on one another’s territories to clear perspectives on this archaeological entity, which literally straddles the two nations.

Since the excavations at Mehrgarh, in the Kachi district in Baluchistan, have offered a continuous chrono-cultural sequence from the seventh millennium BC to the third millennium BC, the general consensus of the Pakistani, American and European archaeologists who have worked on sites in Pakistan have been that there is ‘no need to look outside the subcontinent to find analogies when we have such strong cultural and historical continuities in the actual region of study’ (62,63,64). Their view is similar to Marshall’s, who noted that ‘it may be, nay it is more than likely, that this civilization was the offspring of several - born perhaps rather of the soil itself and of the rivers than of the varied breeds of men which they sustained’ (65). Yet, despite their presentations, which oppose foreign roots for the civilization, its subcontinental ethos is being fiercely reiterated through claims made by Indian archaeologists such as Chakrabarti, that there was ‘no break whatsoever in the Indian prehistoric development; the basic story is that of adaptation of prehistoric people to different areas’ and that the ‘conscious aim of nationalist research should be to understand this adaptation in all its regional varieties’ (36). He is also of the opinion that ‘mercifully, this aim can remain uncluttered by the ambiguities of our literary tradition’ (36), thus swinging his logic to accommodate a program for historicizing identities through a discrete category of sources, compiled neatly within the domain of the ‘archaeological’ alone.

In this respect, it is interesting to note that despite expressing sentiments such as ‘if [archaeology] has to strike deeper roots in...[the] educational system, it can do [so] far more effectively as a part of the general province of history than in isolation’ (26), archaeologists in India have increasingly begun to voice their anxieties when ‘mainstream’ historians write on India’s prehistoric past. Curiously, individuals who do not exactly qualify as scholars of the field, and those sharing sectarian views, such as David Frawley, Koenraad Elst, Navaratna S. Rajaram, Bhagwan Singh and Michel Danino, are being allowed to present their non-scholarly opinions on Indian history through the once prestigious journals devoted to Indian archaeology, *Man and Environment* and *Puratattva*. Considering that the distinction between archaeological and historical enquiry in the South Asian context can essentially be on choices of perspectives, and even these overlap as the two emanate from similar aims, to demand the authority of ‘archaeological’ sources and methods over others can only comply with one of the earliest observation made on Edward Said’s formulation of orientalist-imperialist relationships, that ‘the relation of any scholar to his material is essentially and necessarily a relation of power over it. No scholarly effort ever sees the light of the day without it being a sign of control over a certain body of material’ (66).

Schemes for establishing a national consciousness through archaeology in India has involved casting slander, randomly calling western and many established Indian scholars, especially historians and indologists, colonialists, neocolonialists, elitists and activists, and maligning their scholarship as ‘simplistic, pompous’ and ignorant of ‘the local and regional complexities’, as examplified by Chakrabarti (36).

The rhetoric of finding proof through archaeology offers means of foreclosing dissent by invoking the authority of performing ‘science’, although one has to appreciate that the creation and appraisal of ‘scientific’ evidence established through archaeological methods require an intellectual grasp on historiography, since it is historical conditions that offer excavated artifacts the legitimacy of a proof. This makes a narrative for an aspect of the past derived purely through the archaeological methodology as contingent as that acquired through other intellectual means of investigation.

Of the many unfortunate repercussions of national jingoism on interpretations related to the Indus Civilization, the absence of a coherent professional disavowal for establishing a pseudoHindu culture in the third millennium BC through ‘archaeological’ sources has been the most glaring. It may well be a sign of a dismissal of historical consciousness by those who are involved in the excavation of Indian ‘grass roots’ that they can argue on the one hand that ‘the pursuit of a nationalist goal in archaeology is entirely justifiable as long as this does not bend archaeological data and is not used as an intellectual support for chauvinism’ (36), and yet suggest that ‘in such multiethnic nation states as India the notion of the ancient past should not be based on the perceived and historically evolving and changing interactions, linguistic and other differences, but on the story of their interactions and common achievements’ (36).

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Chapter V.2.

Aryanization of the Harappan Civilization



The Indus Civilization does not provide the basic substratum of today's Pakistani culture, nor do the inhabitants of the Greater Indus Valley have any cultural and religious affiliation with the so-called Aryans and their Vedas. But one cannot avoid the eternal problem of the elusive Aryans and their relationship with the Harppans because of the Vedic drama, whether it was a truly momentous event in the history of Pakistan or it was merely a nonevent of no historic significance played at an indeterminate time between East Afghanistan and the Indo-Gangetic Divide. In India, the 'Aryan Question' is important from a different angle: was the 'Indian civilization' and Hindu religion an indigenous phenomenon or was it developed by some 'foreigners' - the Aryans and the Aryanized Indus people? How to nurture the notion of the Aryans as the originator of the Hindu (Indian) Civilization but still not be indebted to any 'foreigner'? And how to explain a well-heeled urban civilization, the Harappan Civilization, if the Indian civilization started with the Aryans? The answer is to formulate a myth: that is, the Harappans and the Aryans were one and the same thing! And, since the Indus Valley is "India" (Pakistan being a "temporary gap in Indian history"), Vedic ('Hindu') civilization becomes not only indigenous but also has its roots deep in "Indian" antiquity. This chapter examines this myth, which is increasingly making inroads into school and college textbooks and has excited a whole generation of Indian youth.

"Aryan Question" is one of the most consuming intellectual projects for the historians of Ancient India, Pakistan, Iran, and Central Asia and it has been studied from a number of angles. Indeed, the subject has captivated the imagination and dedication of generations of archaeologists, linguists, anthropologists, historians, and many scholarly, and not so scholarly, dilettantes. In modern India, the discussion of the "Aryans" is especially charged, politically and religiously, with the debate having produced a lot of polemics on all sides. As a consequence, apart from just being a historical debate, the Aryan debate has now acquired a political and social life of its own. Moreover, what used to be a debate among scholars has spilled over into the public arena, and the sober works of academicians are now swamped by the polemics based on some absurd ideas and outlandish myth-making, mainly by amateurs but also by otherwise serious scholars.

The debate revolves around several interrelated questions: Who were the Aryans? Did they even exit as a separate race or a linguistic group? Where did they come from? Did they invade the Indus Valley and bring the Indus Civilization to an end? Did they trickle in as small groups of migrants from

across the Indus and settle down in the upper Indus plains after some initial skirmishes with the local people? If they were indeed migrants, when did they come? During the Harappan period? during the period of its decline,? After the demise of the Harappan Civilization? Or, were the Harappan people themselves the Aryans, thus no invasion, no migration? Where and when were the hymns of RgVeda composed? In Punjab? In the Pashtun country? In eastern Afghanistan? In southern Afghanistan and western Baluchistan? During 1500-1200 BC? During 1200-1000 BC? During 1000-800 BC? Before the inception of the Harappan Civilization? or in incredible antiquity of the seventh millennium BC? Or, to the horror of some, were the Aryans really the composers of the Vedas? Although all these questions are interrelated, our main concern is here to examine the claim that the Harappans were the Vedic people and the Vedic people were in fact the Hardpans. In other words, were the authors of the RgVeda also the authors of the Harappan Civilization? In short, see if the equation [the Harappan = the Aryans] holds.

Who were the Aryans: The term ‘Aryan” is derived from ‘arya’, which itself is derived from two sources. There is the ancient text from Iran, the *Avesta*, which was probably composed at approximately the same time as the *RgVeda*, and uses the term '*airiya*' for describing the authors of the text. The *RgVeda* uses the term *arya* to describe its authors. So, taking both these terms into consideration, it was decided that these people were to be called Aryan. Originally, it was visualized as a linguistic group but the nineteenth century scholars, including people like Max Muller, frequently confused language with the race and often equated them.They talked about an Aryan race on the basis of people speaking the same language and that is where in many ways the problem arose. Strictly speaking they should be talking not about the Aryans but about the people who spoke the Aryan language, or better still, the people who composed the RgVeda and the Avesta, the Vedic people, the Avestan people, the Indo-Aryan people.

The difference between language and race is enormous. Language is cultural, it is a functional construct deliberately forged by a society for communication and articulation, while race is biological. Anyhow, Max Muller argued that the Aryan races originated in Central Asia. One branch came to Iran, another branch went to Europe. Max Muller then argued that the branch that came to Iran split into Indo-Iranian and IndoAryans, the latter came to Afghanistan and then to northern Pakistan. From here, after a long period of occultration, they started expanding into the Indo-Gangetic Divide and further on into GangaJamuna doab. During this process of occultration and expansion, the Aryans imposed on the indigenous peoples of the Indus plains their language, a type of Sanskrit, as well as their culture and religion. This culture came to be known as the Vedic or the Aryan culture. Thus, according to this scenario, when we talk about the Aryans we cannot restrict our discussion only to what was happening in the Indus Valley and the IndoGangetic Divide; we have to take into consideration what was happening in Afghanistan, Iran and Central Asia; even further, in Turkey and Iraq and Mesopotamian.

By the early twentieth century, when Harappa and Mohenjodaro were being excavated, the Aryans had been fashioned through empirical sciences as being culturally superior and physically more vigorous than the local Indus people. They were systematically compared to the nonAryan indigenous people, the *dasas* or *dasyus* of the post-Harappan inhabitants of the Indus Valley, often identified with the Dravidians. Grand theories that envisaged a common homeland for the Indo-Europeans from which the Indo-Aryans migrated and supposedly intruded the Indian subcontinent were fashionable, as did the climate of colonial politics which manipulated them. Trautman (1) describes for the first use of the term, the manner in which the migration and homeland theories were developed, and the

establishment of the Aryan 'race' as a cultural marker through ethnographic, linguistic and historical surveys of South Asia.

Speculations related to the authorship of the Indus Civilization began to circulate even before any skeletal material was unearthed. In this respect they were similar in character to the claims made by archaeologists, such as Ajay Mitra Shastri throughout the 1990s for the presence of a temple under the Babri Masjid at Ayodhya. Gordon Childe, by then a renowned archaeologist of prehistoric Europe, suggested three possible ways of relating the meager archaeological data available to him in 1924 with the aryanization of the Indus plains. He proposed that either the whole civilization of the Punjab is Aryan, or the Aryan elements enter at some date within the long ages represented by the accumulated debris, or the Aryans were just the destroyers of the newly discovered culture.

Theories about physical resemblances between the Dravidians of peninsular India and the Sumerians, that were first aired by H.R. Hall (of the British Museum and the first excavator of Ur in 1919) in his *Ancient History of the Near East* (published in 1913), resurfaced, and the anthropometry of a Dravidian racial type played a significant role in analyzing the measurements which were taken of the excavated skeletal assemblages from 1926 onwards. Marshall, however, provided a circumspect review of these speculations and held his belief that 'any attempt to equate the Sumerians with ancient Dravidians is complicated at the outset by the difficulty of defining either the Sumerian or the Dravidian type' (2). But what he also discarded from the very outset, were the claims that the people of this civilization were Aryans. In this respect, Marshall's footnote with an exclamation mark at the end to highlight the absurdity of the hypothesis of 'one Indian writer' who 'sought to find in this civilization confirmation of [the] theory that the Aryans emanated from India itself', expresses his sense of exasperation for those who ignored the historical narratives of the Aryan migration.

Coming of the Aryans: Invasion, Migration, or None? Aryan domination, irrespective of form or agency, has been the basic theme of the history of the first millennium BC in the subcontinent. This was said to be the result of either an invasion of or a migration to the subcontinent of people belonging to the Aryan race in such overwhelming numbers that it resulted in a displacement of preexisting populations and their primitive cultures. The latter were said to have fled to the south of India, where they gave rise to what was called the Dravidian race and Dravidian culture. Six groups of skeletons from Mohenjodaro and the 'intrusive culture' of Cemetery H, represented for Wheeler the destruction of the city by Aryan invaders (3), and with this interpretation he offered the evidence to substantiate Childe's third proposition (that the Aryans were just the destroyers of the newly discovered culture). As Kenneth Kennedy pointed out, "speculations about the archaeological traces of the Aryans which were feeble before excavations began in Mohenjodaro became firmly entrenched with continued excavations...and especially after the unearthing of the Cemetery H at Harappa" (4). What also becomes clear is that the practice of verifying a theory derived from a particular reading of a specific text, through material finds which were reckoned to predate the text in question by approximately a thousand years, posed no methodological problems.

Wheeler's evidence was discredited within twenty years. George Dales, from the University of Berkley, reexamined the contexts in which the bones from Mohenjo-daro were found belonging to different chronological periods. He could thus refute Wheeler's case for a single tragedy (5). Thirty years since Dales' work, Kennedy explained their disarray due to conditions generated during an epidemic, and stated that the Harappans, 'mindful of hygiene' may have interred them in 'those parts of the city which were abandoned during the later periods of cultural decline' (6). Indra, the warlord

of the Vedic people, was thus completely exonerated.

The Aryan Invasion Theory, however, remained in place for some time. Although the Aryans were no longer responsible for the destruction of the Harappan Civilization (they arrived too late to do so), they did have skirmishes with the postHarappan inhabitants of the Indus Valley as evident from the reading of the RgVeda. However, the archaeological picture of the second and first millennia BC (or even earlier for that matter) provided little or no support for a large-scale invasion, or a displacement of peoples and cultures.

Although no one now believes that the Vedic people (the 'Aryans') were the destroyers of the Harappan Civilization, thousands upon thousands are still gleefully writing about the "demise" of the "Aryan Invasion Theory". It does not matter that presently no one has ever attempted to defend the Wheeler position that the Harappon Civilization, or at least the city of Mohenjo-daro, was done in by the Aryan hordes. This hypothesis was discredited shortly after its inception in early sixties but the poor horse, although thoroughly dead long time ago, is still being flogged.

The Aryan Invasion theory was replaced by the Aryan Migration Theory. The Aryan Migration theory is different from the Aryan Invasion Theory in two important respects. First, while the Aryan Invasion Theory was based on surely linguistic data without any archaeological support, the Migration Theory has been carefully linked up with archaeological evidence at each and every phase of the migration, beginning from Ukraine and successively advancing through Pontic steppes, Turkmenistan, northern Afghanistan to the Indus Valley and then to the Indus Valley. Second, while in the Invasion the *Dasas*, *Dasyus* and *Panis* were taken to be non-Indo-Europeanspeaking aboriginals of the Indus Valley, in the Aryan Migration Theory they too are taken to be Indo-Aryan-speakers, albeit speaking a dialect somewhat different from the one used by the Aryans. Furthermore, it was not sure if these groups of people were indeed the Post-Harappan inhabitants of the Indus Valley or the Aryans came in contact with them elsewhere, for instance in Afghanistan.

The debate over such a migration, and the accompanying influx of Vedic religion from the West, is as politically charged in modern India as the Invasion Theory. Some nationalist organizations, especially, remain opposed to the concept. Outside India, the political overtones of the theory are not as pronounced, and it is discussed in the larger framework of Indo-Iranian and IndoEuropean expansion. The historians in Pakistan are generally indifferent to this debate. The Greater Indus Valley has been subjected to frequent invasions as well as more frequent human migrations from the millennia past, going as far back as the Stone Age. The biological composition of the Indus people is a result of such invasions and migrations and the culture of this area has always been a *melange* of the West and the East. The genetic mix of the current population in Pakistan is the evidence. Thus, the coming of the Aryans at some particular moment in time is, in effect, a nonevent. Similarly, if they came from across the River, from the Pashtun country, or from some distance in Afghanistan or Baluchistan, is immaterial. Whether the Aryans brought a new language with them or the Indus people already spoke a dialect of this language does not matter either: the borderline regions must have been bilingual as they are presently in the whole of Pakistan.

It is interesting to note, and especially now that some archaeologists denounce the Aryan invasion theory as a 'plain racist myth' (7), that although scholarship on the aryanization of the Indian subcontinent developed within the milieu of colonial politics, the quest for seeking the Indo-Aryans materially was fully developed through excavations of chalcolithic and early historic sites by Indian

archaeologists only after the end of the Raj. Three of the earliest excavations which were conducted after Indian independence and which sought to correlate textual references for the Aryans with the excavated material, were Lal's at Hastinapura (1950–2), H.D. Sankalia's at Nasik (1954) and Navdatoli (1957–9). Even the effective demolition of Wheeler's evidence, failed to disturb their deeply rooted belief in the historicity of waves of migrating Aryans, and therefore the Aryan participation in the decline of the Indus Civilization was never fully rejected even by those who have made insightful comments on the contingent nature of archaeological evidence (8). Only Chakrabarti (9) had questioned the usefulness of the migration theory, four years after Dales had demolished Wheeler's evidence of a massacre at Mohenjo-daro. India's once leading archaeologist, Hashmukh Sankalia, who from the 1950s tried to correlate his discoveries of chalcolithic sites in Maharashtra with the tribes and dynasties mentioned in the Puranas, added another dimension to the Aryan involvement through his suggestion that 'if we regard the Harappan culture as Aryan, and the various Baluchi and preHarappan as pre-Aryan, then we can explain very well the subsequent spread of the Harappan Culture in Punjab, Gujarat, and Saurashtra, and its subsequent decay or disappearance by about 1700 or 1500 BC.' (10). His speculations were revived by B.B.Lal (11,12) and S.P. Gupta (13) by interchanging the arya with the Hindu, and imposing a questionable methodology on groups of 'finds' from sites situated within India, in Gujarat, Haryana, Rajasthan and Uttar Pradesh, to expose features of modern Hindu rituals. How these 'finds' connect with the Harappan Civilization, beats other archaeologists.

As though the discord among archaeologists and historians were not enough, in recent years, another group, this time the so-called "Vedic Scholars", has also joined this festival. Their strokes are however gentler; they just want to resurrect this dead horse, albeit a few millennia earlier in history. For them, the Aryans were not the destroyers of the Indus Civilization, they were the Harppans themselves, concluding that the Indus Civilization was in fact Vedic. Since it seems to be a favorite pass-time of the theoreticians who have anything to do with the Indus Civilization, we have chosen to take part in this ongoing fervor also, although very briefly and very lightheartedly.

Our main focus will be the question whether the authors of the Indus Civilization were indeed the so-called Aryans and whether the Indus Civilization can somehow be characterized as the Vedic Civilization, as some would like to have us believe. There are some excellent books and monographs on the questions pertaining to Aryan invasion or migration theory, their origins, their culture, their religion, their social structure, and their politics; some of them are listed in the Biography at the end of the book. There are also a large amount of literature, mainly in the nature of polemics that challenge the 'foreign' origin of the Aryans and the commonly accepted dates for the composition of the RgVeda. The Internet is full of these propositions. The riot is: the Aryan Invasion Theory is dead, the Aryan Migration Theory is

The efforts since independence at identification of the Indus Civilization with the Vedic Aryans seem to aim at the glorification of the Vedic culture for several reasons: first, the identity of the Indus Civilization with the RgVedic culture helps not only to establish a much greater antiquity for the Vedic Dharma and culture than hitherto recognized but also to give them the credit for producing one of the oldest civilizations of the world, at least as old as the Mesopotamian civilization. (*Suraj Bhan*)

dead, The *Sindhu-Sarasvati Sabhyata* is Vedic, The Hindu Civilization of India is Vedic, the Harappan Civilization is the same as Vedic civilization, and so forth.

Aryan = Harappans? For the past several decades there have been attempts in India against those who subscribed to either of the two theories, i.e. the Invasion theory or the Immigration theory. Concurrently, there have been attempts to prove that the Aryans were indigenous to India. To make it work, it is necessary to push the dates of the RgVedic composition back to the fifth, even sixth, millennium BC, making it contemporary to the predecessor cultures of the Harappan Civilization. Now, if the *RgVeda* predates the Harappan Civilization or is of the same date, there is an "unbroken" continuity from the Indus Civilization to the present and if that continuity is articulated in terms of the Hindu Culture, the Indus culture obviously becomes the Aryan without intebtness to the West, especially to the west of the Indus. In spite of the constant repetition of this view in an attempt to enforce it, it fails the test, since the evidence - both archaeological and literary - does not support it. This is a different argument from that which suggests that there could have been some continuities from Harappan times into the later period and that the Vedic culture may reflect some of these. Of course, these attempts do not correlate much of the evidence. There is a tendency to read some specific Vedic texts, usually the *RgVeda,* without any attempt to refer to any archaeological reference. They

simply go on talking about "this is mentioned in the *RgVeda*, there it is the same culture, etc." Nor is there any understanding of the way societies function, that is the least of it (14).

The question of connections between the Aryans and 'the civilization of the Indus Valley' did not first arise after the Partition in 1947; it had been asked much before this and soundly rejected. Marshall himself, in the first excavation report on Mohenjo-daro, had emphasized the contrast between the two cultures and argued against the Vedic Age preceding the Bronze Age civilization. Sharp differences with Marshall's views had been expressed in the 1930s but the tempo quickened after 1950 when Pusalkar who in his presidential address to the thirteenth session of the Indian History Congress at Nagpur presented it as a full-fledged hypothesis. He raised this issue specifically with reference to Wheeler's formulation of civilizational collapse. For Pusalkar, the Indus Civilization was “but a phase in the composite Indian culture inaugurated by the RgVedic people”. He highlighted several features: the autochthonous nature of these people, as suggested by the absence of any tradition or reminiscences of an outside home in their literature (the *RgVeda* being the arbiter); the problems in accepting Max Muller's dating of the *RgVeda* at 1500 BC and the possibility of a much earlier beginning; the evidence of the horse in the Harappan Civilization and its implications for the hypothesis that linked this animal with the Vedic people. Much thought was given to Pusalkar's writing but his arguments were not accepted by everyone. P.R. Deshmukh, for instance, mustered internal evidence from the *RgVeda* to argue that the Harappan Civilization antedated that text, and that pioneer Aryan invaders destroyed that civilization. ceive reflections of the Vedic civilization in the art motifs depicted on Indus seals and pottery, and the language of the Harappan culture.

S.R. Rao, himself a Sanskritist without formal training in the field of archaeology and historical methodology, was impressed by the traditionalists. He looked for evidence of the Sanskrit language, the horse, fire altars, animal sacrifices, the custom of *sati*, and cremation of dead at the late Harappan sites he excavated in the 1950s. On evidence reported from Lothal, Kalibangan, Banawali, and other places (in India) in 1973, he tried to make people believe that the Indus Civili

As though the discord among archaeologists and historians By the second half of the were not enough, in recent

1950s the theory of Aryan Inva sion as well as the Aryan migra tion was vehemently resisted. The impetus was purely religious and nationalistic. It was affront to most of the Indians to suggest that civilizations have always been brought to them from out side, from the Indus Valley, from Macedonia, from Damuscus and Baghdad, from Kabul and Ghazi, from Central Asia, and from Europe. The coming of Aryans, with their unique civilization, were one of these events. A myth was thus borne: all Hindus are Aryans and Aryans are indige nous; therefore, all Hindus are indigenous and have not come from outside. Since Aryans are indigenous, Indian civilization developed indigenously. Since there were evident linguistic links between the Vedic people in question and those of a large area in Eurasia, a strong evi dence is suggested for popula tion movement, and this move ment must have originated from India (the *RgVeda* is the proof!).

years, another group, this time the so-called "Vedic Scholars", has also joined this festival. Their strokes are however gentler; they just want to resurrect this dead horse, albeit a few millennia earlier in history. For them, the Aryans were not the destroyers of the Indus Civilization, they were the Harppans themselves, concluding that the Indus Civilization was in fact Vedic. Since it seems to be a favorite pass-time of the theoreticians who have anything to do with the Indus Civilization, we have chosen to take part in this ongoing fervor also, although very lightheartedly.

Thus, India is the cradle of civilization, not the receiver of civilization; to boot, it has its roots in the Indus antiquity.

The development of this myth in its totality was rapid. As Suraj Bhan, in a thought provoking article, *Aryanization of the Indus Civilization* (15), details, the Sanskritists and traditionalists with a Brahmanical mindset found it hard to accept the thesis of archaeologists that the Indus Civilization

was pre-Vedic and non-Vedic or that it could even have been destroyed by the RgVedic Aryans. T.N. Ramachandran, K.N. Shastri, Swami Shankaranand, Pusulkar and several others began to perzation was in fact Vedic (16,17) This was an attempt to meet the objection raised by Sir John Marshall against identifying the Indus Civilization with the Aryans. In the absence of authentic evidence, and the unscientific method of correlating cultures known from two different sources (archaeological and literary, respectively) S.R. Rao failed to impress archaeologists and historians.

An ideological movement was then initiated by Baba Saheb Apte Samarak Samiti and the Bharattiya Itihasa Sankalan Samiti who were committed to the RSS ideology of Hindutva (see the preceding chapter). In the early 1980s, they took up two problems:
(1)Who were the Aryans? and (2) The search for the lost Vedic Sarasvati.

A thesis was then advanced (18) that the Indus Civilization is, in fact, centered in the GhaggarHakra or 'Sarasvati Valley' as shown by the greater frequency of Harappan sites (all periods combined) in it than in the Indus Valley. On a reinterpretation of the RgVeda it was advocated by Bhagwan Singh that the Indus Civilization was Vedic, that the

RgVedic people were urban and had a rich economy, specialized craftsmen, sea trade, advanced social institutions, and fortified cities. Talking of the relative distribution of settlements, S.P. Gupta proposed in 1989 that the Indus Civilization be renamed the Indus-Sarasvati Civilization (19). He argued that Vedic elements such as the horse, fire altars and animal sacrifice had existed at the so-called 'Indus-Sarasvati' culture sites in Gujarat, the Indo-Gangetic Divide as well as in the Indus Valley. It was also declared that the Aryan invasion was a myth. In 1996 it was professed that the 'Indus-Sarasvati' Civilization was no other than the Vedic Civilization since the two had the same geography and culture (19). Gupta's work was made much easier by a comprehensive article by V.N.Mishra on the *'Indus Civilization and the Rigvedic Sarasvati'* (20) in which the RgVedic Sarasvati was made out to be a mighty perennial river fed by the Sutlej and Yamuna, which flowed into the sea through the same bed as that of the present Ghaggar-Hakra dry bed. The Indus culture flourished in the Ghaggar-Hakra basin until the Sutlej and Yamuna shifted to their present courses leaving the Sarasvati dry in the later Vedic period. This line of argument virtually suggested a correspondence between the Indus Civilization and the RgVedic age.

Bisht (21,22) also mounted on the bandwagon, as did Chakrabarti (7,23,24), although he did not outright come forward to equate this 'Vedic civilization' with the Harappan Civilization. Finally, B.B. Lal dismissed the question of an Aryan invasion and Dravidian (non-Aryan) authorship of the Harappan Civilization and emphasized the existence of Aryan features in it (25). He tried to push back the date of the RgVeda to pre-1900 BC, making it coeval with the Indus Civilization and concluded:
'All that can be said at the moment is that:
(1) There is no clinching evidence whatsoever to establish the much advertised equation that the Harappans were a Dravidian-speaking people,

(2) the Indo-Aryan authorship of the Harappan civilization cannot be ruled out, but is not yet categorically proved; and

(3) the final verdict can come only when the Harappan script is really deciphered.

All these efforts to identify the Indus Civilization with the RgVedic culture are based mainly on three assumptions: That the Indus Civilization was Sarasvati-based; that the RgVedic culture was coeval

with the Indus Civilization; and that the RgVedic culture was no different from the Indus in language, religious practices and urbanism. In other words: RgVedic and Mature Harappan geographical *and cultural* horizons coincide. The core area as well as the contact area of the *RgVedic* and mature Harappan cultures are found to be one and the same. The region extending from the Ghaggar-Hakra in the East to the left bank of the Indus was the cradle of both the cultures. It was known as *Sapta Sindhavh* to the RgVedic people as evidenced in the RgVeda, and it is the region in which the maximum number of Harappan sites is located. Additionally, the lat

A myth was thus borne: the Hindus are the Aryans and the Aryans are indigenous. Since Aryans are indigenous, Indian civilization developed indigenously. Since there were evident linguistic links between the early Aryans and those of a large area in Eurasia, it suggested a population movement, and this movement must have originated from India (the *RgVeda* is the proof!). Thus, India is the cradle of civilization, not the receiver of civilization; to boot, it has its roots in the Indus antiquity.

est limits of RgVedic and Mature Harappan chronological horizons coincide, proving their partial overlap.

The RgVedic chronology still continues to be a matter of controversy, Linguistic, West Asian inscriptional, astronomical, archaeological, and other kinds of data and evidence have been used to fix the chronology. Efforts to reach acceptable conclusions have so far failed "partly because of inherent limitations of certain sorts of data and partly because of a lack of mental clarity among some scholars who do not maintain a clear distinction between the antiquity of the language of the RgVeda and the antiquity of the hymns contained in the text, and sometimes even confuse the time of composition of the hymns with the time of their compilation." Notwithstanding this "confusion" and outright scholarly "failure", the proponents of this theory equate the Harappan and *Sutra* periods and push back the *RgVedic* period to an age much earlier than the Harappan. Their arguments are strictly internal, that is, the reading and interpretation of the RgVeda. While majority of the mainstream archaeologists and historians date the composition of the RgVeda to about 1200-1000 BC, the Vedic scholars push it to earlier than 4000 BC, some as early as 7000 BC! It is also claimed on 'archaeological grounds' that the mosaic of the RgVedic and Harappan cultural contents have striking resemblance. The perception that the RgVedic is rural and illiterate and the Harappan urban and literate was 'wrong'. First, the rural-urban dichotomy itself is incorrect for in every culture and specially that of ancient times, the number of

people engaged in agriculture far exceeds the number of those who participate in nonagricultural production and trade. The "evidence now at hand shows that the *RgVedic* culture too had reached the stage of urbanization" (a surprising discovery, indeed). R.S. Bisht (21,22) brought out 'enormous data from the RgVeda' to show that some *RgVedic* people "lived in urban centers and carried on long distance trade by land and sea". Undoubtedly the *RgVedic* Aryans destroyed their enemy *purs* (strongholds or fortified towns), but they also built *purs* of their own and lived in them. They describe their *purs* as metal-strong (*ayasi*), multisided (*satabhuji*), spacious (*Vipula*), broad (*urvi*) good-looking (*subhra*) and auspicious (*bhudra*), etc.

Notwithstanding these claims and as will be shown in subsequent discussion, the Harappa Culture cannot be identified with the RgVedic as they are neither contemporary nor are the two cultures materially similar. The geographical area included in the Harappan system was far more extensive than the region known to the *RgVeda*. Considering that the RgVeda was composed in the Indus Valley

and the area to its west, and considering that the sites of the Harappan Civilization are found in the whole of this region, the correlation between the Vedas and the people of this civilization is certainly not an improbability. But textural and archaeological arguments are overwhelmingly against this proposition.

On both of these grounds, this issue should have been considered settled by now but there are a few archaeologists of Hindutva leaning who want to keep the debate alive. For a while B.B. Lal exemplified this continuing interest and his writings forcefully underlined the fact that the debate on this issue was far from over (26,27). S.P.Gupta (13,19,28) and S.R. Rao (29,30) are two other archaeologists of sort who continued to lend support to this myth.

The details of these arguments are not the concern of the present chapter, what is important is that such a debate exists and the reader should be aware of it. Although it is a great distortion of history, we shall confine ourselves here to presenting a few opinions that counter this Hindutva proposition of christening the Harappan Civilization as the Vedic civilization. The issue of the Vedic Sarasvati, we shall take up in the next chapter.

We choose not to reiterate the arguments of the innumerable ‘Vedic scholars’ that choke the Internet space with their nonsense. These arguments are based on the reading of RgVedic hymns as though they were a written history and not a product of mythology. Such a material has no place in any scientific enquiry except, perhaps, as a side show. Some scholars have used the RgVeda to counter the arguments of the Hintuva but largely as tongue in the cheek. As Romila Thapar said, it appears that one cannot avoid to turn to this red herring, no matter how much one tries.

Counter Arguments: There are, of course, many archaeologists and prehistorians who are unhappy with such opinions and have gone to the extent of doubting virtually everything that has been written about the ‘indigenous’ Vedic people since the late 19th century. Suraj Bhan (15,31), Ram Sharan Sharma (32,33), Iran Habib (34,35), Shereen Ratnagar (36,37), Sudeshna Guha (38), D.N.Jha (39), Michael Witzel (40,41), and above all Romila Thapar (42,43,44,45) can be mentioned among them. In the followings, we review, albeit briefly and albeit in an edited shape, three of them: one by Suraj Bhan, the other two by Ram Sharan Sharma and Romila Thapar, respectively. D.P. Agrawal also adds his voice.

Suraj Bhan Speaks Out: Suraj Bhan prefaces his essay, *North Indian Protohistory and Vedic Aryans* (31), with these remarks:

“During the last two decades, some eccentric attempts have been made to identify the Indus Civilization with the *RigVedic* culture. Their conclusions are based on wrong assumptions claiming that

(i) the Harappan sites have recently yielded the

evidence of fire altars, sacrificial pits and true horse, so well known to the *RgVeda*,

(ii) that the RgVedic Sarasvati was a mighty perennial river system parallel to the Indus and was the nucleus of Indus Civilization,

(iii) that the date of the RgVeda goes back to the third millennium BC, the era of the Indus Civilization before the desertion of Kalibangan [and other cities] around 1900 BC, and

(iv) that the RgVedic Aryans knew fortified cities, sea trade and state-based society."



Suraj Bhan

He noted that archaeological investigations carried out in Pakistan over the last century or so have brought to light two distinct cultural patterns between *ca.* 3500 and 600 BC. The first cultural cycle is marked by the advent of agropastoral communities in the Indus plains from north Baluchistan and western Sindh around 3500 BC, which through several regional cultures, we commonly call the Early Harappan cultures, led to the emergence of cities and the growth of craft specialization and trade, about 2600 BC. At its peak, this period, known as the Harappan Civilization, was characterized by the growth of fortified urban centers, town planning and drainage, monumental architecture using sun-dried and fired bricks for storage of grain and water, long distance trade and sea faring, use of seals and script, standard weights and measures, bronze tools and weapons, a typical pottery tradition and burial customs.

The Indus society eventually disintegrated around 1900 BC as a consequence perhaps of adverse climate changes. This resulted in a noticeable decline of population, desertion of cities and towns, and dispersal of many agricultural communities. The high culture of the Indus Civilization disintegrated into relatively simple cultures, which included regional cultures such as Cemetery H culture, Jhukar culture and other postHarappan cultures in Sindh, Punjab, and the Divide. Their settlements have also been discovered in southeastern Haryana, northeastern Rajasthan, the western edges of the Ganga-Yamuna Doab, and western Gujarat in neighboring India.

The Late Harappan cultures are characterized by regionalization, imperceptible continuity and large change. Continuity with the mature Harappan is seen in the general pattern of ornaments and tools as at Harappa. But the disappearance of fortified cities and their segregated layout, town planning, drainage, granaries, tanks, and the use of writing, seals, standard weights and measures, marks a drastic change in the social, economic and political structure of the society itself. The Late Harappan cultures merge into post-Harappan cultures, one of which is archaeologically identified by excavations in the Swat, Dir and Chitral valleys of Pakhtunkhaw province (the Pashtun country), in the Gomal Valley, in Bolan Valley, at Pirak and at Sarai Khola near Taxila to the east of the Indus, around 1500-1600 BC. The settlements and cemeteries of this timeframe, discovered in the northwest of Pakistan were termed as the Gandhara Grave Culture by A.H.Dani, who dated it between 1700-200 BC. This is the beginning of the second cultural cycle.

The most characteristic features of the Swat culture are wheel-made burnished grey ware and horse burial associated with humans at Katelai (Swat). The culture has clear affinity with those of Central Asia; some scholars have eluded it to the "Aryans". The Gandhara Grave Culture in course of time grew into a regional culture of northwest Pakistan extending as far as the Chenab. It seems to have

been based on chiefdoms. Iron was introduced in the culture by the close of second millennium BC. By around 500 BC the Gandhara Grave Culture seems to have transformed into a state-based urban society or Mahajanapada (aristocracy or a republic) at Taxila. Politically, the area came under Iranian influence. This was probably the society that confronted the armies of the Alexander the Great in 320 BC.

There are signs of some newcomers at Pirak, in southern Indus Valley, also. These newcomers largely adopted pottery and architecture of the indigenous people, but they introduced the horse, Bactrian camel and rice cultivation from the Northwest. Horse burials with the dead is unmistakably a central Asian custom. They also used thin-walled painted grey pottery perhaps in the later phase. These cultures have been dated between 1700 and 700 BC.

A review of these post-Harappan cultural developments would show that the population movements of the Gandhara Grey Ware and the spread of Painted Grey Ware and their derivative cultures, were widely distributed in upper Indus Valley. They established their chiefdoms all over the northern Indus Plains, the Indo-Gangetic Divide, and the western Ganga-Yamuna Doab between *ca.* 1500 and 500 BC. These regional cultures were seemingly established by new peoples, probably dislodging the indigenous populations or subsuming their existing cultures. Another feature worth noticing is the ‘cultural gradient’ which is evident from the West to the East. The settled agricultural villages appear first in the West, particularly in Swat and later in Pothwar and then in Punjab and the Divide. Similarly, the first stirrings of urban settlements and formation of state are felt first around Taxila and Charsadda (in Pashtun country) and then in the Divide and the Ganga-Jamuna plains. There is, therefore, strong indications that the western flanks of the Indus plains were being subjected to a West-toEast movements of peoples, of which the Vedic tribes, originating in southeastern Afghanistan, Northeastern Baluchistan, and the Hindu-Kush area, could be one.

There is, however, no sign of a massive inroad of any one single group at any one time, the process seems to be gradual and rather diffused. Alternatively, it may resemble a billiard ball hitting one in front and that hitting one in its own front. Since the process was gradual, the element of digestion and occultration must be important. One result of such a dispersal of newer peoples is cultural cline in west-to-east direction, at least visible in the northern parts of the Indus Valley. If the agents of this cultural change were indeed the Vedic Aryans, the process reveals a continuous development under all over northern Pakistan from *ca.* 1600 BC down to the threshold of second urbanization and the rise of small kingdoms and ‘republics‘ *ca.* 500 BC. During this period of almost one thousand years, we observe, mainly on textural grounds, the difference between the ‘Aryans’ and the “non-Aryans”(the ‘aryanized’ Indus people) practically disappearing. The political and cultural alliances between different tribes were more on opportunistic grounds rather than on cultural, racial, or ethnic grounds. The difference between the Aryans and non-Aryans practically vanished.

Turning to the Vedic people, the Vedic literature is broadly classified into early Vedic (*RgVeda*) and later Vedic literature (*Atharveda, Brahmanas, Aranyakas and Upanishads*). The literature reveals a continuous growth of culture characterized by Sankskrit language, caste system of society and polytheistic ideas and rituals including yajnas, animal sacrifices and cremation of the dead. They had known the use of copper in the early Vedic and also iron in the later Vedic phases. The earlier time bracket of the Vedic literature can be placed in the middle of the second millennium BC on the basis of inscriptional evidence from Boghaz Koi in Syria and affinities with the culture and language of Avesta. The later limit of the later Vedic literature coincides with the beginning of Buddhist literature

(*ca*. 500 BC).

The Vedic society gradually evolved from argo-pastoral to settled agrarian society. The early Vedic era was distinguished by tribal assemblies while the later Vedic Janaparas were controlled by chiefdoms. A simple division of labor had evolved in the Vedic society suggesting regional exchange networks though it still continued to be a non-urban society having no knowledge of writing. The Vedic society was horse centered and the chiefs performed horse sacrifices. The geography of the *RgVeda* was the Pashtun country and the Punjab, that is, northern Indus Valley. But later on the Vedic people and the 'aryanized' Indus tribes extended their presence into the Divide and the western Ganga-Jamuna Doab. The region between the Ravi and the Jamuna became the nucleus of the *later* Vedic culture, after occultration in the upper Indus Valley, including the Pashtun Country, Pothwar, and the Punjab. for about one thousand years. The ambitious chiefs gradually penetrated into eastern and central India as is known from the Vedic and later literature.

It is clear from the above that the protohistoric archaeology of northern Pakistan and the adjoining part of present-day India is marked by a cultural break between two distinct cultural traditions: Bronze Age traditions on one hand and the post-Harappan cultural traditions on the other. It, however, remains to be seen with which of the two traditions the Vedic culture can be broadly correlated. This has to be tested by comparing and contrasting the chronological and geographical frameworks and cultural characteristics of the two archaeological traditions with the Vedic textural tradition.

Suraj Bhan reached the conclusion that the Vedic Cultural Tradition corresponds better with the Post-Indus cultural tradition characterized by the Gandhara Grey Ware culture, the Painted Grey Ware culture and the Black Slipped or Black and Red Ware culture than with the Indus Civilization. He offers following reasons:
(A) The cultural formations of the Indus tradition date from 3000-1500 BC, but the Vedic tradition dates between 1500-600 BC. Protagonists of the view that the Indus Civilization was Vedic have tried to push back the antiquity of the RgVeda to make the two chronologically compatible. B.B. Lal has argued that the desertion of the Harappan site of Kalibangan around 1900 BC corresponds with the drying-up of the Sarasvati referred to in the Later Vedic literature and the Mahabharata. Since the RgVeda describes the Sarasvati as a mighty river coming down the mountains and going to the sea, the later Vedic literature would become coeval with the early Harappan culture. This would place the RgVeda in the Neolithic period. The absurdity of the argument becomes apparent when one compares the protohistoric sequence of archaeological cultures with that based on Vedic literature by proceeding from the known early historical period (dating from 600 BC) to the unknown.
(B) The cultures of the Indus Tradition spread in the Indus Valley, Ghaggar-Hakra basin and in the Doab and do not extend into middle and lower Ganga Valley in the east and central India unlike the Vedic tradition which extends all over the upper Indus Valley and northern India.
(C)The Indus Tradition declined after 2000 BC and died out around *ca.* 1300 BC, but the Vedic tradition continued to develop down to the early historic era and got transformed into a statebased urban civilization *ca*. 600 BC.
(D) Culturally speaking the Vedic Tradition corresponds well with the chiefdom-based Post-Indus cultures and it reveals a glaring contrast with the Indus Civilization for the absence of fortified cities, town planning and drainage, monumental art and architecture of burnt bricks, advanced specialization and sea trade, use of seals, weights, measures and script and the custom of burying the dead in cemeteries.
(E) The identification of fire places as fire-altars and as sacrificial pits in Harappan sites in the Doab

is no less than fabrication of the evidence to support the distorted version of Indian history, viewing the past cultural mosaic not as it actually was, but as they wanted to see it. The same applies to the imaginary reading of ‘Sanskrit’ legends on Indus seals

The socioeconomic formation of the Indus Civilization is distinct from the RgVedic as well as the more developed Later Vedic cultures by its urban, class- and state-based character.The evidence of fortified cities, brick architecture including granaries, tanks, wells, drainage, a script, seals, standard weights and measures from the Indus cities have no mention in the Vedic literature. The supposed occurrence of the remains of the domesticated horse and fire altars, etc. (generally associated with the RgVedic Aryans) in the Indus sites of Lothal, Kalibangan, Banawali, etc. cannot be considered authentic unless such evidence is recovered from the pre-Harappan and early Harappan cultures.

In short, the material culture of the Harappan Civilization is quite different from that reflected in the RgVeda. The Vedic culture cannot even be identified with the post-Harappan Ochre Colored Pottery (OCP) cultures, although the former may have been a later contemporary of the latter. The post-Harappan OCP cultures represent the last and decadent stage of the Chalcolithic cultural traditions, while the Vedic culture reveals the evolutionary stages of a different cultural tradition. In all probability, the Vedic cultural tradition produced the Painted Gray Ware (PGW) and related cultures. This had no genetic relationship whatsoever with the post-Harappan OCP cultures. In fact, the horse- and iron-using PGW and black slipped-ware people displaced the post-Harappan and OCP culture settlements from the IndoGangetic plains, particularly the Ghaggar-Hakra basin and the Ganga-Yamuna Doab. Identification of the Harappan or the Late Harappan cultures with the RgVedic Aryans is, therefore, merely a myth.

The efforts since independence at identification of the Indus Civilization with the Vedic Aryans seem to aim at the glorification of the Vedic culture for several reasons: first, the identity of the Indus Civilization with the RgVedic culture helps not only to establish a much greater antiquity for the Vedic Dharma and culture than hitherto recognized but also to give them the credit for producing one of the oldest civilizations of the world, at least as old as the Mesopotamian civilization. Secondly, it bestows its 'original home to the RgVedic Aryans within the Indian subcontinent and gives them the credit of exceeding in extent all other contemporary civilizations of the ancient world. Finally, identification of the two also gives credit to the Vedic culture of creating well-planned fortified cities, vast state, knowledge of writing, standard weight and measures in decimal scale, long distance trade and contacts with West Asia, burnt brick architecture, large granaries, tanks, wells and stadium, the growth of sciences, bronze technology and transport over land and sea which are characteristic of the Indus Civilization. The process of the construction of this myth rests upon the questionable conversion of the Indus Civilization into the Vedic heritage.

What is important here is to know why some of the Indian archaeologists do archaeology the way they do? The reason is the archaeologists, like historians, belong to their age and society. Major social and political movements in the country and the world influence them too. It is for this reason Indian archaeologists revealed colonial, communal, and nationalist pressures ever since the beginning of the 20th century. Those influenced by the progressive nationalist perspective viewed Indian nation and culture as pluralistic and composite, evolving historically. It is the appreciation of national and social need that promoted the values of secularism. The adherents of the ideology of Hindutva, on the other hand, believed that India is a Hindu nation and has Hindu culture in continuity from Vedic Aryans. The mosaic of cultures of the past evolving into composite Indian culture

through the process of history was seen by them not as it really was but what they wanted to see it. They are selective and lack holistic and relative view while collecting or analyzing the data. They even do not hesitate from distorting, manipulating or even forging the mute archaeological evidence to suit their ideology and opportunistic interests. This is what was attempted by some pseudo archaeologists in Indian archaeology in the recent past and they apparently did not have any qualms about it. After all, they are serving a 'patriotic' objective.

Ram Sharan Sharma Takes Issue with B.B.Lal: Ram Sharan Sharma, discussed the relationship between the Indus and the Vedic cultures in some details in his *Advent of the Aryans in India* (32) and *Looking for the Aryans* (33). He presents a host of evidence to question this claim of the Harappans = the Aryans. Sharma makes fascinating use of linguistic evidence to argue that the Indo-Aryans learnt advanced agriculture from the peoples of the post-Harappan cultures. We extract Ram Sharan Sharma's thoughts from his lecture on the Fourth Foundation Day Lecture of the Indian Council of Historical Research under the title: *Was the Harappan Culture Vedic*? It mainly addresses the B.B. Lal's arguments on the issue. His another article, *RgVedic and Harappan Cultures: Lexical and Archaeological Aspects* (46) is also pertinent.

Some archaeologists think that the Harappa culture was created by the RgVedic people. In 1978 this was convincingly refuted by B.B. Lal (47) in terms of the timeframe, geography and the cultural contents of the *RigVeda* and Harappa. But in 1997 he appears as a convert to the view he had controverted. He does not accept the chronological gap between Harappa and the Vedic texts, points to the presence of the horse in Harappa, and dismisses the theory of the glaring disparity between the cultures represented by the Harappan remains and the Vedic texts (11).

The Vedic texts, according to the general consensus of the Vedicists, belong to *ca. ca.* 500 BC. The *RigVeda* may be placed in the late- or the post-urban phase of Harappa; it cannot be linked to the mature Harappa. Lal produces the fundamentalist argument that the *Aitareya Brahmana* refers to the shifting of the vernal equinox from Mrgasiras to Rohini which occurred around 3500 BC., and thus he places the *RigVeda* in the 4th millennium B.C. (11). But modern astronomers who have studied the original texts state that equinoxes are not explicitly mentioned in the *Brahmanas*. It should be noted that the *naksatras* do not move but the point of the equinox moves. Hence there is no ground for placing the *RgVeda* in the 4th millennium BC. More importantly, in view of its geography and close similarity with the *Avesta*, the *RgVeda* cannot be dated in isolation. The mention of the exact names of the Vedic deities in the Mitanni inscription of the 14th century BC. clearly shows that the *RgVeda* cannot be much earlier than the 15th century BC. A good many archaeological traces of the horse from the RgVedic area belong to *ca.* 1500 B. C.

Pleading for the Vedic identity of the Harappan culture, Lal states: "Just as there were cities, towns and villages in the Harappan ensemble (as there are even today in any society) there were both rural and urban settlements in the Vedic times". But linguists and archaeologists who have worked on this subject reject this view. Linguistically, the Indo-Aryans reveal no cities, fortifications, palaces, temples, writing, irrigation, specialized crafts or trade (49).

Lal quotes the *RigVeda* verse X101.8 with Griffith's translation in which the gods are asked to make iron forts, secure from all assailants. Though he rightly questions the meaning of *ayasipur* as iron fort, he asserts that *pur* means a fortified town. The Vedic people had their *purs*, for there is the story that to fight the Asuras effectively the Devas set up the counter*purs* and counter-kingship. Sometimes

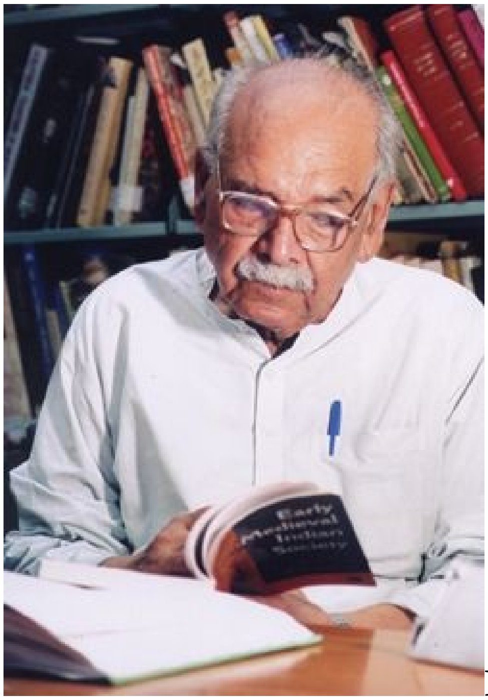
the term *pur* is credited with thousand gates or *sahastradwara*, and is therefore considered a great Harappan town. But the term *sahastra* or thousand is a cliche which is used not only in Vedic texts frequently but also in Ashokan inscriptions and later. However those who have adequately examined references to *pur* in the Vedic texts, particularly in the *RgVeda*, do not consider it a fortified town. Wilhelm Rau, a Vedicist, and George Erdosy, and archaeologist, who have studied the Vedic *pur* in depth, do not identify the Vedic settlements with the Harappan (50,51).

According to Rau, not a word is said in the Vedic texts of the characteristic features of the Indus cities, of brick walls, brick houses, brickpaved streets laid out on an orthogonal pattern, of granaries or public baths. He holds that towns are mentioned at the very end of the Vedic period. Erdosy elaborates the idea of Macdonell and Keith, and questions the very existence of *pur* in the sense of fort on contextual grounds. Thus he considers renewed insistence on equating the RgVedic and Harappan civilizations to be eccentric assertions. In Sharma's opinion the myths and metaphors relating to the *pur* suggest that it was either a dwelling unit or a cluster of such units which appeared in the post-urban Harappan phase. Particularly the early Vedic stone *purs* may indicate the recently discovered rock shelters in which the pastorals lived in the hilly tracts of the Pashtun country and the Pothwar region.

A good part of the territory covered by the earliest Veda is the same as the Harappan area. The *RgVeda* also covers Afghanistan where Harappa had a colony. However, the Harappans covered a large area in Gujarat but this area is unknown to the RgVeda.

B. B. Lal states that in the Harappan region not a single name of the river has any kind of Dravidian affiliation either on the West or on the East (47). It is true that the *RgVedic* region in the Northwest shows almost total substitution of preIndo-Aryan river names by those of Indo-Aryan type. But according to Witzel, a specialist in Vedic linguistics, some pre-Aryan river names have survived. These include Kubha (modern Kabul) river, Krumu (modern Kurram) and possibly the Sindhu (Indus) and Haro (a perineal river in Pothwar). In this view these names have only doubtful IndoAryan/Indo-European etymologies (52). What Lal says implies that Ganga has an Indo-Aryan name. But that is not correct because the term *gang* means river in Mongoloid language and may be of Tibeto-Burman origin.

The plants and animals are different in *RgVedic* and Harappan cultures. *Pipal* and *neem* are the oft-depicted trees of the Harappans. Both these terms are non-Indo-Aryan. The term *nimba* is not known to the *RgVeda*, but the term *pippala* occurs in its first *mandala.* The only agricultural product mentioned in the *RgVeda* is barley, but, besides barley, wheat, sesamum and peas were produced in Harappa. It may be noted that the word *tila* which means sesamum is considered either Munda or Dravidian. Though camel bones appear in Mohenjo-daro, camels appear neither on seals nor in terracottas. They first show up in 1700 BC in Pirak in the Kachi plains of Baluchis



Ram Sharan Sharma

tan. Rhinoceros is an important animal. Unicorns or single horned animals form the overwhelming majority of animal symbols on seals and sealings. But this most favorite Harappan animal is not known to the *RgVeda*. The term *ganda* or *khadga* is used for the rhinoceros in Sanskrit and the term *eksinga* for both the unicorn and rhinoceros, but none of these terms occurs in the *RgVeda*. It is significant that both *ganda* and *khadga* are of Dravidian origin according to Turner.

In addition to the bull the elephant is also represented on the Harappan terracottas, but unlike the horse it is not important in the earliest Veda. The Vedic culture was horse centered. Though B. B. Lal and S. P. Gupta adduce some cases of the presence of the horse (53), these do not generally belong to the mature Harappan phase. That is why this view is countered by S. R. Rao, an older champion of the Aryan Harappa. Richard Meadow who has examined the relevant data on the horse problem finds no osteological remains of the horse before 2000 BC. The recent excavation of Harappa by American archaeologists do not indicate the presence of the horse there, and nor does the Harappan site of Dholavira. Its excavator R. S. Bisht informed Sharma in January 2001 that though he found thousands of bones in Dholavira he did not find any horse bone.

Contacts between the Indo-Aryans from Central Asia and the Harappans in the mature Harappan phase cannot be ruled out. A few Harappans may have known the horse but it is certain that this animal was not in common use. It is because of this that B. B. Lal, later a great protagonist of the Vedic nature of the Harappan culture, would like to have more such evidence from future excavations in order to make sure that the horse did play a significant role in the life of the Harappans (54). In his earlier writing Lal states: “The evidence on the camel and horse is very meager and not wholly beyond doubt” (55). The horse is not represented on any seal despite recent attempts at masquerading a bull as a horse (56). Similarly the spoked wheel typical of the Indo-Aryan culture is absent in the mature Harappan culture.

Lal finds ample evidence of sea trade, and speaks of tremendous wealth obtained from it. In support he quotes a verse from the ninth Book of the *RgVeda* together with its translation by Griffith. The verse reads: “From every side, O Soma, for our profit, pour thou forth four seas full of riches thousand fold”. We may add that the ninth Book in which this verse occurs was solely devoted to

Soma, and added to the main text later. Further, Griffithís translation of *asmabhyam as for our profit* creates an impression of profit arising out of trade; such a confusion is not created by Geldner (57). We should also note that the four seas are called imaginary by Griffith. In this context the commentary of Sayana makes more sense. According to it the sacrificer prays to Soma for the possession of the whole bounded by the four seas. In any case there is no reference whatsoever to tremendous wealth derived from sea trade. This does not mean that the early Vedic people were unfamiliar with the sea (58).

The mature Harappan culture was basically urban, marked by crafts and commerce, in contrast to the early Vedic culture which was rural and pastoral. Lal points out that from urban, the Harappan culture became rural because of a substantial fall in the economy. This clearly means the existence of only villages and not of towns. But B. B. Lal asserts that villages and towns always existed in India and that both appeared in *RgVedic* times. However we may recall that *pur* does not mean a town.

The most striking feature of the Harappan constructions is the use of fired bricks on a large scale. In Egypt mainly dried bricks were used. Baked bricks were used in Mesopotamia, but the extent of their use in the Harappan cities was much larger. Those who would like to attribute the Harappan buildings to the *RgVedic* people should study the term *istaka*. *Ista* occurs in *RgVeda* in the sense of worship or sacrifice which was not connected with brick at the early stage. Had it been so, *istaka* could have been used in the *RgVeda*, as it was done in later texts. This clearly shows the absence of bricks.

Lal speaks of the functioning of the officials called *adhyaksa*, *nidhapati* and *rathaspati* in the *RgVeda*. The first term does not occur in *RgVeda.* The last term *rathaspati* or lord of chariots is used in it in the sense of deity. Even if it is taken as warrior chief, it does not indicate any specific administrative function. Really those who possessed cattle, horses and chariots dominated the Vedic *sabha*. The second term *nidhapati* or owner of snare recalls fowling and hunting adopted by the early people as a source of subsistence. The snare or tab was used for catching birds and small animals (32).

The number of non-Indo-Aryan words in the *RigVeda* shows linguistic pluralism in *RgVeda*. Foreign words in this text suggest the contribution of the speakers of the Harappan languages to the earliest Vedic language. The *RgVedic* people spoke Indo-Aryan language. But since the Harappan script has not been deciphered, we cannot say with confidence about the languages which the Harappan spoke. Recently, Michael Witzel has produced a revealing study on this problem (59). He quotes Kuiper to state that the *RgVeda* contains some 300 words, that is roughly 4 per cent of its hieratic (fixed or stylized) vocabulary, that are not Indo-Aryan. Several scholars have tried to establish the identity of these words. There are twenty-five Dravidian words in the *RgVeda*, and Burrow has noticed 85 such words in later Vedic texts (60). Turner discusses quite a few Dravidian words from the Indo-Aryan languages, and shows that they are connected with cereals, body organs and kin relations (32). He also points out some Munda words in these languages. These include *ganda* (rhinocerous), *langala* (plough) and *langula* (tail or monkey) in the chronologically earliest portion of the *RgVeda.* Witzel states that these words occur in the *RgVeda* language of Punjab. According to him the semi-Munda words appear first in the early portions of the *RgVeda* and Dravidian words occur in its middle and late portions (61).

It has been shown by Parpola that the swords and the dirks with antennae hilts from the Copper Hoards of the Ganga plains have exact parallels in north Afghanistan (62). Bar celts from north Afghanistan are similar to the bar celts characteristic of the Copper Hoards. Bar celts have been

reported from a copper hoard found in Rajasthan. All these similarities between the copper objects of the subcontinent and those of north Afghanistan suggest Munda influence in that area. Because of this Munda words may have penetrated the *RgVeda* in second millennium BC in Afghanistan also.

The present discussion shows that generally the markers of the Harappan culture do not appear in the *RgVeda* and vice versa. Urbanism, crafts, commerce and large buildings characterize the Harappan culture, but the *RgVedic* culture is rural and pastoral. The horse plays a crucial role in the *RgVeda*, but it has no place in the mature Harappan culture. Some *RgVeda* rivers of the northwestern subcontinent bear non-Indo-Aryan names. The Munda, Dravidian and other nonIndo-Aryan words in the *RgVeda* suggest that the Vedic people learnt elements of pottery and agriculture from the late Harappans.

We can always think of interaction between the remnants of the Harappan culture and the later Vedic people. Suraj Bhan had pointed out earlier that the Polished Gray Ware (PGW) culture is more or less the same as the later Vedic culture. A. Ghosh (63) and B.B. Lal (64) also support this view. Though later Vedic culture may be pre-iron, the use of iron, horse and glass appears in both cultures. Both PGW and later Vedic cultures lack fired bricks, scripts and large structures which are found in the mature Harappan culture. Some writers are baffled at the use of rice, and buffalo in the PGW culture. They should appreciate that the later Vedic texts contain many Munda and Dravidian words and because of interaction PGW culture contains non-Vedic elements. In the study of ancient cultures the ongoing interaction between different ethnic and linguistic groups cannot be ignored, but there is nothing to show that the striking elements of Harappan culture appeared in later Vedic times. The PGW people kept pigs like the Harappans, but the Sanskrit term *sukaru* used for this animal is a Munda word according to Turner. Like the Harappans the PGW people kept buffalo, but the Sanskrit term *gowal* for buffalo in later Vedic texts shows that the speakers of the Indo-Aryan language were more familiar with cow than with buffalo.

It is argued that the Indo-Aryans migrated from Harappa to Western Asia and Europe. But why did they not take the Harappan script with them. In the 2nd millennium BC we find Hittite, Kassite and Mitanni inscriptions containing IndoAryans words in Western Asia. Much later when the Buddhist missionaries went from India to Central Asia they carried the Brahmi script and Pali texts. The greatest difficulty in Indo-Aryan diffusion from India is caused by the language of the *RgVeda*. This text is a mixture of Munda and Dravidian words with the Indo-Aryan language. It also contains some other indigenous non-Aryan words which have not been identified linguistically. If the Indo-European language spread from India to Europe why do not we find traces of non-IndoAryan words in Greek and other languages. Evidently the Munda, Dravidian and other term were adopted by the Indo-Aryans when the *RgVeda* and later Vedic texts were compiled as a result of contact with late or post-Harappan peoples.

It is argued that the original home of the Aryans lay in the Ganga basin where they ruled in 7000 BC and from there they migrated to other countries. But there is no archaeological evidence of settlement of that time in the Ganga plains. 7000 BC was the phase of hunters and food gatherers in the Ganga plains. Food producing settlements appear in that area only after 1000 BC. Maharastra is also called the original home of the Aryans. But the settlements on any scale are not found in this area earlier than 800 BC.

Romila Thapar Comments: The Indus Civilization had an extensive agrarian base and an urban population dependent on food production in rural areas. Not only was it essentially urban but the

construction of structures in the elite sections of the cities involved massive brick platforms which, apart from extensive brick-making, would have required elaborate arrangements for obtaining and controlling labor. This points to an entirely different social organization from that characteristic of the *Rgveda* (14). The demarcation between the citadel area of the elite and the residential area was emphasized by a physical separation, and the latter consisted of large familial houses with well-developed civic amenities. The layout of the cities and the meticulously constructed drainage system are pointers to a sophisticated urbanism. This suggests a system more advanced than that of clan chiefs depicted in the RgVeda.

The economy of the cities was based on the gathering of resources and the production of items for trade such as beads and copper ingots, among others. The technology of copper-bronze was not spectacular but focused on a range of items. Obtaining raw materials and organizing craft production would have required a substantial category of supervisors and managers. A script, still undeciphered, was widely employed and was functional. Little is known of the Harappan religion and the possibility of fertility cults and shamanic practices have been postulated. The animals most frequently depicted on the seals are the 'unicorn'-perhaps a version of the rhinoceros, the bull, the elephant and occasionally the tiger. The horse is conspicuously absent until the early second millennium BC when it turns up in various parts of west Asia as well. Associated with the horse was the chariot and the spoked wheel, both as innovations.

The gradual decay of the cities before a total collapse of the civilization did not result in the termination of the Indus culture in one swoop. There is evidence of the usual characteristics of declining urban center - squatters a n d r u r a l migrants moving in, and a dispersal of the city population. There were contacts not only with subsequent cultures such as the Painted Grey Ware in some sites of the Punjab, but possibly also with contemporary Black-and-Red Ware sites in Gujarat. It is feasible to suggest that some of the Harappan traditions in the form of mythology and rituals may well have continued. Nevertheless, the end of the cities would have resulted in a discontinuance of the Harappan administrative system and in the rural areas people would have been unprotected and subject to new forms of dominance by local authorities. It may legitimately be asked if there was now a search for new protectors (14).

The *RgVeda* describes a non-urban, agropastoral society with cattle keeping as its central concern. The geographical spread of the *RgVeda* is only a part of the much larger area involved in the Indus Civilization. Areas crucial to the Harappan trade such as Gujarat, Sindh, Oman, the Persian Gulf and Mesopotamia are unknown to the *RgVeda,* whose geography is defined by the use of the term *sapta sindhu* and the rivers listed in the *nadi-stuti* hymn essentially eastern Afghanistan and western Punjab up to the watershed of the Siwaliks. The geography of the Vedic corpus subsequent to the *RgVeda* and incorporating the Ganga Valley is of course outside the experience of the Indus civilization (14).

There is little in the *RgVeda* about craft production, the main concern being with cattleraids and the produce of cattle herds. The metal technology of the *RgVeda* is copper-bronze, the metal being referred to as *ayas*. There might have been some veering towards iron since the meaning of the generic word *ayas* could refer to iron, even if the latter is generally described in the post-RgVedic corpus as the ‘dark metal’. A writing system has no function in this culture. The rhino, elephant and tiger are unfamiliar animals. The horse however is central to socioeconomic functioning - in herding, raiding and transportation - and to ritual as the focus of a major sacrifice - which was to evolve into the *asvamedha*. The authors of the *RgVeda* are critical of the rites pertaining to fertility

cults and references to goddesses are few and far between. The RgVedic religion is dominated by male deities among whom the virile hero Indra is preeminent (14).

This brief summary should clarify the essentially different type of societies that emerge from the evidence of the Harappa Civilizatioin and the *RgVeda*, even if there be some similarity in a few items. To argue therefore that the *RgVeda* should be identified with the Harappa culture points to a lack in understanding the essentials of the comparative method in historical analysis.

The linguistic evidence for Vedic language and the entire group of what are called IndoAryan languages as belonging to the IndoEuropean family, is overwhelming. This includes a cognate relationship between Indo-Aryan and Old Iranian - the latter being the language of the *Avesta* and particularly the earlier part of the *Avesta*. The relationship is based not merely on a linguistic closeness but also one of parallel concepts, some of which are reversed in the two cultures. A few Indo-Aryan names of deities and technical terms for training horses occur in inscriptions further west in northern Syria, dating to the midsecond millennium BC. The inscription itself is written in a local non-Indo-European language. Archaeologically there are no links between this area and Punjab. These occurrences are thought to belong to an earlier Proto-Indo-Aryan group connected with Central Asia, on the fringes of the area most closely associated with Indo-European (14). The Indo-Aryan language appears to have arrived in ancient Pakistan from north-eastern


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Iran and Afghanistan in the second millennium BC. This is paralleled by the presence of languages derived from Indo-European at a similar time in west Asia.

Locations mentioned in the *RgVeda* indicate a familiarity with eastern Afghanistan, the Pashtun country and Punjab, up to the Siwalik watershed. This would have involved an interface with people settled in these areas. The Nadistuti hymn in a late section of the *RgVeda* sets the final geographical frame as being between the northwest Pakistan and the watershed of the Siwaliks. Contacts with north-eastern Iran and Afghanistan also go back over a long period. It is likely that the inhabitants of the *sapta-sindhu* would have viewed the Indo-Iranian borderlands as their own. The area has historically always played the role of the western front of the land between the Hindu Kush and the Ganga-Yamuna plain, the area which is now Pakistan.The coming and going of families and migrants, whether as pastoralists, traders, caravaneers, missionaries or as armies, has been a constant feature since antiquity of the history of this region; it is the situation even today.

It is interesting that there is information in the *RgVeda* on rivers but little on other georaphical features such as mountains or for that matter, place names. Familiarity with rivers would point to the search for pastures, sources of water, pastures, and arable land along river banks. River courses changed, necessitating the movement of peoples, and migrations would follow the rivers. This would

also be expected to result in migrations from the northwest mountains down to and across the Indus plains (14) and its various tributaries.

This brief summary of the RgVedic society versus the Harappan Civilization does not address the issue of the equation “The Harappan = The Aryans” head on but it does contrasts the social and economic structures of the two societies. This comparison should alone be enough to persuade the reader to discount any talk of equating the RgVdic people with the Harappan. It also highlights the relationship of the ‘Aryans’ with the peoples in the West and the Northwest. Furthermore, the playground of the Vedic people in the subcontinent has been shown to be the area which is now northern Pakistan: the Pashtun country and Punjab, not the oft-repeated area of the Siwalik watershed (the banks of the mythical ‘Sarasvati’).

Agrawal Adds his Voice: D.P. Agrawal (65) also adds his voice to this discussion. According to him:

1. If the Aryans and the Indus Civilization are both indigenous to India, we must assume a continuity of cultural development from the Neolithic to the Harappa Culture to the second urbanization in Pakistan and India. Such a cultural continuity is, of course, not present.

2. The continuous cultural growth is evidenced only in Baluchistan right from the Upper Palaeolithic to Harappans and to their decline. Could that be the area of *Aryavarta* of the Vedic Aryans?

3. The horse is so important an animal in the Vedas but is conspicuous by its absence in the Harappan seals and icons.

4. There is no archaeological evidence to show that the Indus Civilization grew and spread from the “Sarasvati Valley” towards the West (as claimed by D.K.Chakrabarti in his various writings, especially in *India: An Archaeological History*). in fact, all archaeological evidence shows that the Indus Civilization originated in Baluchistan and western Sindh and spread eastwards!

5. The Vedic religion is animistic, in contrast to the Harappan religion, which is patently iconic.

6. At the turn of the second Millennium

BC, there is a break writ large in all aspects: agriculture; diet; burials; architecture; settlement pattern; new cultural elements (like Cemetery-H, Jhukar; BMCA artifacts etc). This all-round break can perhaps be explained only by some new people coming and the local culture taking a new shape.

The presence or absence of the horse in the Indus civilization has been a bone of contention for decades, especially in the context of the “Aryan = Harappan” theory. The argument is familiar: the Rg-Veda uses the word *ashva* over 200 times, thus the *RgVedic* society must have been a horse loving and horse-using society. There is a complete absence of the horse among the animals so prominently featured on the Indus seals and there is no evidence of any horse bones in the Harappan remains, thus the Harappan Civilization, from which the noble animal is so conspicuously absent, must be non-Aryan or preVedic. The horse remains are in evidence in archaeological remains after the collapse of the Harappan Civilization, thus the horse must have been brought into the Indus Valley around 1500 BC by the “Aryans” or somer other folks like them from the West. This line of reasoning is regarded as so evident and foolproof that it is taken to be the final word on the issue.

Parpola quotes from a fairly up-to-date and authoritative report by Richard Meadow (66) that there is as yet no convincing evidence for horse remains from archaeological sites in South Asia before the end of the second millennium BC. Many claims have been made, but few have been documented for independent verification. Mortimer Wheeler, admitted long ago that “it is likely enough that camel, horse and ass were in fact a familiar feature of the Indus caravan” (67). He, however, does not provide any evidence. B. B. Lal, an admitted Hindutva ideologue, refers to a number of horse teeth and bones reported from Kalibangan, Ropar, Malvan and Lothal (11). Another archaeologist of sort, S. P. Gupta, adds further details on those finds (13). Other archaeologists, however challenged these claims and, as stated earlier, there is still no convincing evidence for horse remains in the Indus Valley before 1500 BC (66).

A horse-type figurine did emerge at Mohenjo-daro (fig. above), which drew the following comment from E. J. H. Mackay, one of the early excavators at the site: “Perhaps the most interesting of the model animals is one that I personally take to represent a horse. I do not think we need be particularly surprised if it should be proved that the horse existed thus early at Mohenjo-daro” (68). Another figurine was reported by Stuart Piggot from Periano Ghundai. But in view of the absence of any biological remains, the interpretations on these figurines as that of a horse were relegated to a mere conjecture.

As far as non-depiction of the horse on the Harappan seals, S. P. Gupta points out that the camel, wolf, cat, deer, Nilgai, fowl, jackal are rarely or never found on the Harappan seals but their presence has been attested by bones” (13) K.D. Sethna asks, “As there are no depictions of the cow, in contrast to the pictures of the bull, which are abundant, should we conclude that Harappa and Mohenjo-daro had only bulls? (69). Sethna also makes the opposite point that the


“Horse” figurine from Mohenjodaro

mythical unicorn is found on numerous seals, and asks, “Was the unicorn a common animal of the Indus Valley?” Clearly, animal representations, or their absence, have cultural reasons. Admittedly, there are serious flaws in these arguments.

Why do Hindutva Ideologues Keep Flogging a Dead Horse? Indian history from the perspective of the Hindutva ideology reintroduces ideas that have long been discarded and are of little relevance to an understanding of the past. The way in which information is put together, and generalizations drawn from this, do not stand the test of analyses as used in the contemporary study of history. The rewriting of history according to these ideas is not to illuminate the past but to allow an easier legitimation from the past for the political requirements of the present. It is basically a problem of identity, as Islam is in Pakistan.

Why do these scholars want to glorify the Vedic culture? Here lies the ideological underpinning of archaeology for two reasons: the Vedas are considered the 'source of Hindu social, political and economic institutions' and Hindu culture is in fact, 'The Indian Culture'. The construction of history of their vision, they think, will help homogenize Indian culture and the nation. It has not yet sunk in their minds that the Vedic culture and the Vedic people did not fly over Pakistan, they had at least one thousand years of acculturation in the Greater Indus Valley before they even reached their beloved 'Sarasvati'. And when they settled around Ambala, who knows who was the Indus man and who was the 'arya'. Furthermore, do we *really* know who composed the Veda. Could it not be a 'joint effort' between the Aryans and the locals - Indus and non-Indus? Probably, the answer would be that Pakistan was and still is "India". This is another absurdity, "India" was till very recent time a recognizable cultural entity and the area that we now know by the name of Pakistan was never a part of this imaginary entity. The Indus Valley and the area beyond the Indus was by all later accounts, especially that of *Mahabharata*, a land of *Mleccha*, a people to be despised, a people who were soiled.

The Hindutva obsession with identity is not a problem related to the early history of India but arises out of an attempt to manipulate identities in contemporary politics. Yet ironically, this can only be done if the existing interpretations of history are revised and forced into the Hindutva ideological mold. To go by present indications, this would imply a history based on dogma with formulaic answers, mono-causal explanations, and no intellectual explorations. Dogmatic assertions with no space for alternative ideas often arise from a sense of inferiority and the fear of debate. Hence the determination to prevent the publication of volumes on history which do not conform to Hindutva ideology. A parallel attitude is observed in Pakistan and Bangladesh as well and it is as anti-intellectual as that prevailing in India.

Since India became a democratic, secular and federal state, its polity has drastically changed. The fissiparous tendencies of casteism, regionalism, etc. in Indian politics have drawn inspiration from the belief in the heterogeneous and pluralistic character of Indian culture and the Indian nation. This is seen as a challenge to the Brahmanical hegemony over Indian society and politics. Hence the ideological offensive to meet the 'challenge to the Hindus' in which archaeology and history can become important tools in the struggle for hegemony. The appropriation of the Indus Civilization, the glorification and propagation of the Hindu religion and culture as well as efforts for Brahmanical hegemony have their parallel in contemporary appropriation of the glorious heritage of 'others' and even heretics in India by assimilating it in the 'Hindu' heritage selectively. The 'others' in danger of being devoured include Buddhism, Jainism, Sikhism, Arya Samaj, and Hindu revolutionaries

History as projected by Hindutva ideologues, which is being introduced to children through textbooks and is being thrust upon research institutes, precludes an open discussion of evidence and interpretation. Nor does it bear any trace of the new methods of historical analyses now being used in centers of historical research. Such history is dismissed by the Hindutva ideologues as Western, imperialist, Marxist, or whatever, but they are themselves unaware of what these labels mean or the nature of these readings.The authors like D.K. Chakrsabarti, B.B.Lal, S.R.Rao, and before them Chanda, Savarkar, and Pusalkar, are idolized and a host of their young followers are busy in cluttering the Internet space with nonsensical promulgations and endlessly parroting the sayings of their heros without even a hint of critical understanding. There is no recognition of the technical training required of historians and archaeologists or of the foundations of social science essential to historical explanation.

Concluding Remarks The ‘Aryan question’ is still alive and well, especially in India and among the India diaspora in the USA. In the current Indian historical literature there are two apparently contradictory attitudes to this issue. On the one hand, scholars like B.B.Lal, S.R.Rao, and D.K.Chakrabarti are enthusiastically denouncing the Aryan Invasion or Migration Theories and declaring the ‘Aryans’ as indigenous. On the other hand, there are those, such as Romilar Thappar, Shereen Ratnagar, Ram Saran Sharma, Suraj Bhan,D.N.Jha, Michael Witzel, and Steve Farmer, who deny the indigenous origin of the Aryans. There is another debate: when were the hymns of the RgVeda composed and where? The conventional wisdom is that they were composed sometimes between 1500 and 1200 BC, some of them in Afghanistan, some in the Pashtun country of Pakistan, and some in Pothwar and some in the plains of Punjab. This paradigm places the Aryans in the Indus Valley after the demise of the Harappan Civilization. There are others, especially the so-called ‘Vedic scholars’, who push theres dates in antiquity, in fifth millennium, even eighth millennium BC. This makes the Harappan a ’Vedic’ civilization.

The contours of the problem are drastically altered when the debate shifts from exploring the Aryan-Central Asian or Aryan-Harappan equations to the appropriation of the Indus Civilization to the “Indian civilization” through dragging this civilization eastward until it lands squarely on the banks of the Sarasvati, a roaring river of the RgVeda, within the boundaries of the present-day India. The whole exercise is driven on two requirements: First, the Aryans are the fountainhead of the Indian civilization. Second, the civilization originated within India - thus no Aryan invasion and no Aryan migration. This is a very complicated task and a lot of mythology needs to be created to convince the uninformed.

For those concerned with a Hindutva ideology, the invasion or migration had to be denied. The definition of a Hindu, as given by Savarkar was that India had to be his *pitribhumi* (ancestral land) and his *punyabhumi* (the land of his religion). A Hindu therefore could not be descended from alien invaders. Since Hindus sought a lineal descent from the Aryans, the Aryans had to be indigenous. When the historians, based on the archaeological data emanating from the Indus sites, change the Invasion to a series of smallscale migrations of some western nomadic tribes, one of which as well may have called themselves *arya*, the theoretical paradigm did not change much; the ‘Indian civilization‘ still remained pegged to an outside source. Thus, a paradigm of “the Aryans = the Hardpans” was to be invented. The equation is based on identifying words from the *RgVeda* with objects from the Indus cities. If the two societies were not identical, the two systems would at least have to be similar. The Indus Civilization thus became Vedic. After 1947, a new ‘difficulty’ arose. The core area of the Indus Civilization, which was now a ‘Vedic civilization’, presently lied outside India. Thus, an additional myth was needed, that is, the Indus Civilization was a misnomer, it was in reality a Sarasota civilization, centered around the Ghaggar watershed stream in northwestern India. To make it more kosher, the date of the RgVeda was to be pushed back to fourth millennium BC, sometimes even 7th millennium BC.

The position taken in this chapter is that the Indus Civilization is neither Dravidian nor Indo-Aryan, but is itself, its own, unique configuration of culture. There were many Indus peoples, with many backgrounds and histories, speaking a variety of languages, probably from a number of language families. Furthermore, it is immaterial if the Aryans came to the Indus Valley from the west of the Indus or from the west of the Hindu-Kush. The important point is that linguistics do connect them to a much larger group whose spread is indicated over a large area of the Old World. Furthermore, the Aryan migration was not a unique event in the ancient history of Pakistan; this region has been

subjected to an endless series of invasions and migrations from the West and that of the so-called Aryans was one of them. The Aryans got their importance in India through the Vedas and their relationship with Hindu religion. The significance of this migration for the history of Pakistan lies in the fact that the Vedic drama was played out largely in this region, ranging from the Kurram to the Sutlej-Beas, in the hills and valleys of the Pashtun country, the plateau of Pothwar, and the plains of the Punjab.

The timings of appearance of the Vedic people, again whether originating in the west of the Indus or in far away across the Hindu Kush, is also significant. The Harappan Civilization had already disintegrated and the Indus people were trying to rearrange their society under their rapidly changing economic and social circumstance. The newcomers, including the ‘aryas’ helped the indigenous people to dislodge themselves from the socioeconomic system that had already failed and failing. The incessant raids, thievery, the demolishing of irrigation *bunds*, elimination of inefficient grazing patterns, depriving the inefficient herders of their cattle, burning the static villages, all reflected in the RgVedic hymns, were useful, although painful, steps. The vigor and resourcefulness, which are generally the characteristics of pastoral nomads, was definitely an assets in this transformation. It helped the society to rearrange itself once again and put the populace on the path of state formation and urbanization. In this respect, the coming of the Aryans, as any other peoples, could be an important phase of Pakistan’s history, manifesting itself in terms of a multidimensional transformation during such an apportunate time.

Thus, while we amuse ourselves with the feeding frenzy of the Hindutva scholars and their adherents or feel anxious about the corruption of the Indus history, we should not loose sight of the long range effects of the Aryan’s invasion or migration in the Indus Valley.

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Chapter V.3

The Vedic Sarasvati: A "Lost" River



"Ambitame, naditame, devitame, Sarasvati Aprasastaiva smasi prasastim Amba naskriti.
(Rigveda – 2. 41. 16)
(O Sarasvati, you the best of mothers, the best of rivers, the best of gods. Although we are of no repute, mother, grant us distinction.)"
This is how a RgVedic seer had expressed his

feelings about a river which he had addressed as the best of rivers, the best of gods. In fact, the RgVeda is full of praises for a mighty river referred to as *Sarasvati*. It is described as a "glorious, loudly roaring", "strongly flowing"; "mighty" river with "great floods", "most powerful among rivers", "flowing from the mountains to the sea"; etc. There is an exclusive hymn in which the river is praised as "fierce", "swifter than the other rapid streams", "coming onward with tempestuous roar", "bursting the ridges of the hills with its strong waves"; it springs from a "threefold source", etc.

All these forceful utterances in the RgVeda and many other references to Sarasvati in other Late-Vedic literature was bound to create a lot of interest among the Indologists and the scholars of ancient history of India and Pakistan. They wondered, whether there was a real river in the geographical region of the Vedic people which matched the description in the literature. Scholars were divided into two schools. One group sought a separate river in the relevant geography of the past, somewhere in between the River Indus in Pakistan and the River Ganga in India, which had become dry in course of time and lost in the desert. The second group felt that the present riversystem in Pakistan and that in northern India precludes any possibility of providing space to another big river as prominent as narrated in the Rigveda. They held that the RgVedic Sarasvati is a poetic depiction of the grand River Indus, or any other big river of the region. However, it was left at that, as a disputed case, unresolved till now, awaiting further investigation and more data.

Lately, the entire debate has taken an ugly turn: the Sarasvati issue has been attached with the Vedic Aryan issue, claiming: 1) Vedic culture is much older than Harappan civilization; 2) A settled agricultural population - the so-called Aryans - developed the Rigvedic culture on the banks of the River Sarasvati from where it spread westward; 3) The River Sarasvati was a very large river, which

gradually dried up, in the subHimalayan region before the advent of the Harappan Civilization; 4) The Harappan Civilization was a continuation of the Vedic culture which in course of time developed from a village culture into an urban culture; 5) It is, therefore, wrong to differentiate between the two cultures; they belong to the same ethnic group of people - namely, the 'Aryans'; 6) The ancient Indian civilization should not be termed Indus Valley Civilization, it should better be referred to as the Sarasvati Civilization, or, at most as the Sarasvati-Sindhu Civilization; etc. etc. This is rewriting of history of India and Pakistan, Hinduttva style.

"In the current official and quasi-official effervescence over newfound truths about our past, that keep coming in a stream from resident and, especially, nonresident oracles, the Sarasvati River has come to occupy a preeminent perch. In 1999, the Geological Society of India published a full-scale memoir, *Vedic Sarasvati*, in which, among other innovative pieces, is included a paper by the late V.S. Wakankar, who here assumes that everything worthwhile could have originated only on the holy banks of the Sarasvati. Thus, to begin with: the upper Sarasvati region forms the nucleus of human evolution (1)". Thus begins Iran Habib, a preeminent historian of India in his critique on Hindutva's attempts in rewriting Indian history (2).

The crux of this scholarship, as outlined in the last two chapters, is to prove that the Aryans, who were admittedly the authors of the Vedas, were of Indian origin, and that the Indian culture has its roots in Vedic Civilization, that the Indian Civilization developed around the River Sarasvati, that the Vedic Saravati is in fact the GhaggarHakra River streams, now dry. Furthermore, the Harappan Civilization was centered around the Sarasvati, it was a Vedic Civilization, and the Harappan people were therefore the Vedic Aryans. In the presentations of the Indianized version of the Indus Civilization, the *Sindhu Sarasvati Sabhyata*, which has been conjured up by archaeologists such as Lal and Gupta, one does not find cruder instances of the ways in which archaeological evidence is being tailored to condition knowledge. Material proof is currently being offered to establish the boundaries of a river, the Sarasota, within or near the boundaries of modern state of India. The Indus Civilization is being converted to the Saravati civilization and then to a fraction of the great Vedic civilization.

According to S.P. Gupta, formerly of the National Museum, New Delhi, "the IndusSarasvati civilization represents one very important aspect of the developed Vedic civilization." He adds that the Harappan culture was "the gift of both the rivers and perhaps more of the latter (Sarasvati)" (3). He thinks in terms of Indus versus Sarasvati and India versus Pakistan. In his view, the existence of a large number of Harappan sites on the 'Sarasvati' underlines the importance of the Vedic Sarasvati. V. N. Misra of the Deccan College, also supports this view, that is, the Indus culture was Sarasvati-based and that "the Harappan Civilization was not the product of one river alone, but of two rivers, the Indus and the Sarasvati" (4). Since a look at any atlas may not disclose a river like the Sarasvati running parallel to the Indus, Misra joins Gupta in inventing a "Sarasvati System", which includes the old beds of the Sutlej (*sic*!), Ghaggar, Drishadvati, Yamuna, etc. One can then pursue an unspoken chain of logic: If the alleged Sarasvati system was important for the Indus culture, its people must have held Sarasvati sacred; and if they held such a belief, they must have been Vedic Aryans (not Dravidians or other unknown people). So Misra could more easily uphold Gupta's argument that "the Harappan and the Vedic were neither two different culture-complexes, nor the earlier (*sic*! former) preceded the latter" (5).

O Ganga, Yamuna, Sarasvati, Shutudri (Sutlej), Parushni (Ravi), hear my praise! Hear my call, O Asking

(Chenab)Marudvridha (Maruvardhvan), Vitasta (Jhelum) with Arjikya and Sushoma. First you flow united with Trishtama, with Susartu and Rasa, and with Svetya, O Sindhu (Indus) with Kubha (Kabul) to Gomati (Gumal or Gomal), with Mehatnu to Krumu (Kurram), with whom you proceed together.
Nadistuti Hymn from RgVeda, 10^{th} Mandala, a later part of the holy book

to the Indus Valley, ignoring all what had already happened in Baluchistan and Sindh before the emergence of urbanism in the Indus Valley (6). Among western scholars, Kenoyer and Possehl also pay homage to the Sarasvati, believing that the "archaeological data supports the textual information that proclaims the ancient Saraswati as a great river with many populous settlements along its course" (7), and that "the Sarasvati began to dry up at the beginning of the second millennium, but that seems to have taken a lot of time" (8). They have, however, not as yet speculated on its exact course from the source to mouth.

There are a number of 'Vedic Scholars', who go even further. For example, there is US Swami David Frawley, who tells us that "the IndoEuropeans and other Aryan peoples were migrants *from* India, not that the Indo-Europeans were invaders into India". In this new version of the race theory, however, the Aryans did not simply go out from India, they went off from the banks of the Sarasvati. Thus Frawley speaks of "the preIndus period in India", namely that of the Yajurveda, "when the Sarasvati River was more prominent". The "NASA scientist," N. S. Rajaram, tells us that "the Sarasvati River and the Sarasvati civilization are inseparable", and the latter name is the correct one to give to what has so far been known (incorrectly) as the Harappan or the Indus Civilization". Indeed, "the ebb and flow of the ancient Sarasvati river determined the fate of the Harappan Civilization". That the two great excavated cities of the Indus Civilization, namely, Harappa and Mohenjo-daro, or such sites as Dholavira or Lothal are not on the Sarasvati, does not matter to the proponents of the Sarasvati nomenclature. Giving a name amounts to half the battle, and if the Indus Civilization is to be rechristened 'Sarasvati Civilization', name-capture, not argument, is

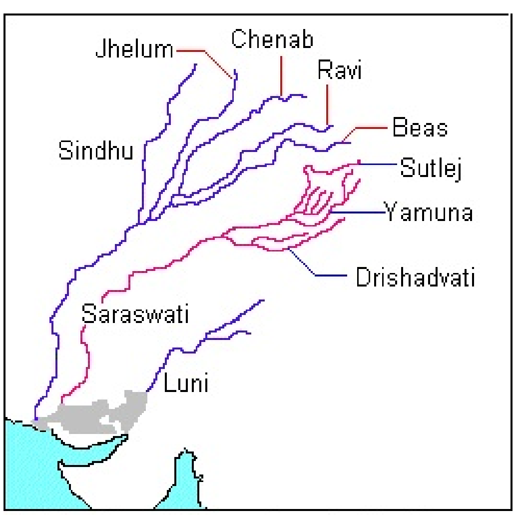
A large number of such absurd statements keep on coming not only from nonprofessional through the Internet and Vedic book publishers but also from those who previously have had some credentials in archaeology. For example, D.K. Chakrabarti, who happens to enjoy the prestige of Cambridge University to his credit, adds his voice in support of this myth-making, claiming that the Indus Civilization began on the banks of the Sarasvati and then spread *westward* the thing that matters (2). It may be recalled that John Marshall had used the name "Indus Civilization" in 1931, and Stuart Piggot had preferred "Harappan Culture" in 1950. Both terms are valid, the first referring to the geographical region of the Indus basin, and the other to the type-site.

The reference to this river can be found in the *nadistuti* hymn which appears in a chronologically later mandala, i.e. the tenth, of the *RgVeda*. The archaeological evidence, now being presented to situate the Vedic Sarasvati on the Indo-Pakistan border, is largely based on speculations that were published in the 1980s, *viz*., that a river system ran parallel to the Indus during the third millennium B.C. and was drained by, among others, three rivers, the Sutlej, the Yamuna, and the 'lost' Sarasvati (9). The physical evidence for this 'river system', wherein the Ghaggar-Hakra figures prominantly, was established through maps of Landsat images taken during 1972–7, and remote-sensing the courses of three palaeochannels which were observed on these maps. It was also asserted at that time, that tectonic events in the Himalayas could have changed the courses of the rivers Sutlej and Yamuna, and caused the Sarasvati (and subsequently a part of the entire 'river system') to dry up (10). The

seasonal river known in Pakistan today as the Hakra, Nara, Waihinda, Raini, and in India as the Ghaggar (which one also finds interchangeably mentioned as the Drishadvati and Sarsuti within the Indian territories), were theoretically accepted as being original to the lost and partly dried up ‘river system’.

However, even before this ‘evidence’ was collated, the Sarasvati had made its appearance within the Indian territories as an extension of the Chautang, on maps illustrating the distribution of Harappan sites, and in drainage systems for the northern region of the Indus Civilization (11). Many excavators had also speculated on its flow (12). So, it is not a coincidence that the launching of an archaeological campaign from the late 1990s that demanded a public recognition for the physical existence of the Vedic Sarasvati running parallel to the Indus and towards the boundaries of modern India, has juxtaposed the hardening of Hindu politics. By corroborating inconclusive geomorphological observations with the *nadistuti* hymn, relegating the chronology of the entire RgVeda to the fifth and the fourth millennium BC, and thereby seeking chronological overlaps between the ‘RgVedic age’ and the Indus Civilization, Lal has demonstrated that the Sarasvati “flows on” (13). Others have sought to show that the distribution of ‘Harappan’ sites is concentrated mainly on the now dry channels of the GhaggarHakra, and in offering their proof that the latter is the physical relic of the RgVedic Sarasvati weave a tautology that “.... the vivid description of the Sarasvati as a perennially flowing, mighty and most sacred river in the many hymns of the RigVeda, and the largest concentration of Harappan sites on the Ghaggar-Hakra course, clearly establish that the RigVedic Sarasvati and the present Ghaggar-Hakra are one and the same river, as has been argued by many geographers, geologists, historians, and archaeologists for more than a century” (14).

This onslaught on history is relentless. Chapter V.1. and V.2. give a glimpse of this organized, government sponsored, effort. The whole question of the Sarasvati, therefore, needs to be scrutinized carefully, perhaps as carefully as N.S. Rajaram’s famous "horse" on the Indus seals (16). Indeed, some scholars of repute have already come out to confront these pseudoarchaeologists and Vedic scholars. Suraj Bhan (17) is one of them. In 2000, Irfan Habib read a valuable paper at the Indian History Congress (2) refuting the nonsensicals of the Hindutva ‘scholars’, especially B.B.Lal and S.P.Gupta. More recently, Ashish Chadha wrote an incisive article, detailing the historical development of the Aryan Sarasvati hypothesis (18). Rajesh Kocchar (19) wrote elegantly on the identification of the Vedic



Vedic Saraswati as drawn by Valdiya

Imagining a Vedic river system that flowed parallel to the Indus

Sarasvati and its recent manifestation in the form of Ghaggar-Hakra River stream, Romila Thapar is

known to speak out against this corruption of history whenever she can (20,21,22), and Sudeshna Guha (15) has detailed the misuse of archaeology in support of Vedic mythology. Of course, there are some others, such as Shereen Ratnagar (23), D.N.Jha (24), and Ram Sharan Sharma (25), who have shown their disdain for these archaeologists of sort without going into specific details of this Hindutva hypothesis. In the West, there are few takers of this 'factual" history of the Harappans, the Aryans, the Vedas and the Sarasvati; their interest in the Aryan question generally revolves around Europe. Nevertheless Michael Witzel has dealt with the issue on linguistic grounds (26,27). The following material is extracted from these writings, especially by Iran Habib, Rajesh Kocchar, and Ashish Chadha.

Identifying the Vedic River: Let us consider what the proponents imagine the river to have been. The basic text they go to is, naturally enough, the *RgVeda*. In the *RgVeda* the Sarasvati appears as just a goddess often with two other goddesses, *Ida* and *Bharati*; as a goddess of ritual and speech; as a river-goddess; and, finally, as a river.

The Sarasvati is mentioned in 13 hymns of the late books (1 and 10) of the RgVeda. Only two of these references are unambiguously to the river: 10.64.9 calling for the aid of three "great rivers", Sindhu, Sarasvati and Sarayu and 10.75.5, the geographical list of the *Nadistuti* verse. The others invoke Sarasvati as a goddess without direct connection to a specific river. In 10.30.12, her origin as a river goddess may explain her invocation as a protective deity in a hymn to the celestial waters. In 10.135.5, as Indra drinks Soma he is described as refreshed by Sarasvati.The invocations in 10.17 address Sarasvati as a goddess of the ancestors as well as that of the present generation. In 1.13, 1.89, 10.85,10.66 and 10.141, she is listed with other gods and goddesses, not with rivers. In 10.65, she is invoked together with "holy thoughts" (*dhī*) and "munificence" (*puraṃdhi*), consistent with her role as a goddess of both knowledge and fertility.

Within the multivalent mythological universe of Hindu cosmology, Sarasvati was far more than her riverine avatars. In the RgVeda, in association with Indra, she killed Vritraasura who hoarded the earth's waters and was often seen as an equivalent to other Vedic goddesses such as Vak, Savitri and Gayatri. In Puranic lore, she is the wife of Brahma and is the heavenly representation of intelligence, consciousness, cosmic knowledge, creativity, education, enlightenment, music, the arts and power. Within the heterogeneous universe of pre-modern Hinduism (from the Vedic to the Tantric), Sarasvati, like most figures of the celestial pantheon, was a polysemic divinity having manifold manifestations and not existing exclusively as a vanishing riverine body. However, the genealogy of her essentialization as a hydrological entity can be traced to the epistemologies of 19th century Indology and colonial cartography within the 'inscription field' of colonial modernity.

The 10th mandala, the most recent one, of RgVeda contains two famous verses that contain a list of rivers that every practicing Hindu utters during his or her bathing ritual to this date:

Be pleased with my laud, O Ganga, Yamuna, Sarasvati, Shutudri, and Parushni; with Asikni, Marudvridha, Vitasta, Arjlki and Sushoma hear [me].

First with Trishtama you rapidly flow forth, with Susartu and Rasa with Shveti here, You Sindhu, with Kubha, Gomati, Krumu and Mehatnu, seek you course together.

The first refers to the rivers to the east of the Indus and the second to the rivers in the West. Thus, there is no doubt that to the RgVedic people Sarasvati was, in addition to a deity, as much a real river

as others. Most rivers can be identified and show some geographical ordered. It will be seen that in this list rivers are arranged east to west. The Sutudri is Sutlej (Ptolemy's 'Zaradros'); the Parushni is generally taken to be the Ravi; and the Asikni is more certainly the Chenab, since the latter is named Askesines by Alexander's historians and by Megasthenes. Aurel Stein has felicitously identified Marudvridha with the Maruwardwan, an affluent of the Chenab. Vitasta, the same name used also in the *Rajatarangini*, is modern "Behat", the Jhelum of the maps. Sushoma is probably the 'Soanos' of Megasthenes, the modern Soan or Sohan, a small eastern tributary of the Indus in the Pothwar region. The Arjikiya is not firmly identifiable, while the Vipas or Beas mentioned elsewhere in the *Rigveda*, III. 31.1-3, and IV.30.11, is here omitted. In the second verse we have rivers largely in the West, although their modern equivalences are less certain: Tochi (*Trishtma*), Kunar (*Susastro*), Panjkora (*Rasa*), Swat (*Shveti*), Indus (*Sindhu*), Kabul (*Kubha*), Gomal (*Gomti*), Kurrum (*Krumu*), Bara (Mehatnu?). The name of Ganga and Jamuna appear only in the 10^{th} book, which is the latest and most recent.

Even with a few omissions, there is enough geographical exactitude here as to enable us to place the Sarasvati definitely inside the Sutlej-Yamuna divide. From this it has been assumed that we have here the Sarasvati (locally called 'Sarsuti') that passes by Thanesar in Haryana, and is generally associated with multi-stream Ghaggar in India and Hakra when it enters Pakistan. From the above it is evident also that the geographical concordance of these rivers to the hydrography of Pakistan and the adjoining part of India is quite strong. Furthermore, it does not escape our attention that land of the early Vedic people were the area which is now known as Pakistan, mainly the Pashtun country and the Punjab. If there was any *Bharataversa*, it was indeed northern Pakistan, not the banks of Sarasvati or the plains of Ganga-Yamuna.

In post-Rigvedic literature, Sarasvati is clearly a river and its disappearance is also. For instance, in texts like the Satapatha Brahmana, Aitareya Brahmana and the Jaiminiya Brahmana, the magnificent Sarasvati of the RgVeda is described as a vanishing river which had shrunk in size and virtually disappeared. In the Mahabharata, the river is described as drying up in a desert. In later Puranic lore, the Sarasvati is referred to as a subterranean river that eventually resurfaces at the triveni sangam in present-day Allahabad, where two of the most sacred rivers of Hinduism merge - the Ganga and the Yamuna.

The origin of the Sarasvati River is identified as Plaksa Prasravana. The Plaksa Prasravana (place of appearance/source of the river) may refer to a spring in the Siwalik Mountains. The distance between the source and the Vinasana (place of disappearance of the river) is said to be 44 *asvina* (between several hundred and 1600 miles). In a supplementary chapter of the Yajurveda (34.11), Sarasvati is mentioned in a

Sample Citations on Sarasvati from *RgVeda*:

"The large river, known afar, that is as large as the whole of the waters that run along the earth; that runs powerfully from the height hukairya down to the sea vouru-kasha"
"All the shores of the sea vouru-kasha are boiling over, all the middle of it is boiling over, when she runs down there, when she streams down there, she, aredvî sûra anâhitâ, who has a thousand cells and a thousand channels: the extent of each of those cells, of each of those channels is as much as a man can ride in forty days, riding on a good horse."
"From this river of mine alone flow all the waters that spread all over the seven Karshvares; this river

of mine alone goes on bringing waters, both in summer and in winter. This river of mine purifies the seed in males, the womb in females the milk in females' breasts."
"Best mother, best of rivers, best of goddesses, sarasvati; We are,as though without praise, O mother, make us praised."
"In you, O goddess sarasvati, all lives are situated; be, pleased with shunahotra-s; O goddess grant us progeny"
"Rich in vigor, O sarasvati, be pleased with these incantations of ours; the mental creations which the gR^itsamada-s dear to the gods bring to you the upholder of the R^ita."
"Yea, she most dear among dear streams, Seven-sistered, graciously inclined
Sarasvati hath earned our praise."
"Seven-sistered, sprung from threefold source, the Five Tribes' prosperer, she must be Invoked in every deed of migh"
"Marked out by majesty among the Mighty Ones, in glory swifter than the other rapid streams,
Created vast for victory like a chariot, Sarasvati must be extolled by every sage."
"Coming together, glorious, loudly roaring - Sarasvati, the Seventh (*saptathi*), mother of rivers (*sindhumata*), with copious milk, with fair streams, strongly flowing, full swelling with the volume of their water"
"Pure in her course from mountains (*giri*) to the ocean (*samudra*), alone of streams, Sarasvati hath listened".
"Yea, she most dear among dear streams, Seven-sistered, graciously inclined Sarasvati hath earned our praise.
"Seven-sistered, sprung from threefold source, the Five Tribes' prosper, she must be Invoked in every deed of might"
"Marked out by majesty among the Mighty Ones, in glory swifter than the other rapid streams,
Created vast for victory like a chariot, Sarasvati must be extolled by every sage."
"Coming together, glorious, loudly roaring - Sarasvati, the Seventh (*saptathi*), mother of rivers (*sindhumata*), with copious milk, with fair streams, strongly flowing, full swelling with the volume of their water.
Rigveda, VII, 95.2: "Pure in her course from mountains (*giri*) to the ocean (*samudra*), alone of streams, Sarasvati hath listened".

context apparently meaning the Sindhu: "Five rivers flowing on their way speed onward to Sarasvati, but then become Sarasvati a fivefold river in the land."

The first reference to the disappearance of the lower course of the Sarasvati is from the Brahmanas, texts that are composed in Vedic Sanskrit, but dating to a later date than the Vedas themselves. The Jaiminiya Brahmana (2.297) speaks of the Sarasati 'going underground', and the Tandya Brahmana calls this the 'disappearance'. The same text (25.10.11-16) records that the Sarasvati is 'so to say meandering' as it could not sustain heaven which it had propped up. In the Latyayana Srautasutra (Late Vedic) the Sarasvati seems to be a perennial river up to the Vinasana, which is west of its confluence with the Drshadvati (Chautang). The Drshadvati is described as a seasonal stream (10.17). The Asvalayana Srautasutra and Sankhayana Srautasutra contain verses that are similar to the Latyayana Srautasutra. From these numerous references a selection is presented in the text box to buttress the notion of the "Vedic Sarasvati" as a "mightly" stream, the core of a vast "Sarasvati System".

Although there must still be doubt as to where the Sarasvati is being addressed as a goddess of rivers and where as a specific river, it is of prime interest to us here to identify this actual river that was

known to the Vedic people as the Sarasvati. The difficulty is that the authors of the RgVedic hymns repeatedly used many hydrdonyms as they radiated out from their original homeland to occupy new territories. Thus, we have cognate names of Sarasvati, Sarayu, Rasa, Kubha, Sindhu both in the Indo-Aryan and Iranian spheres of activity, and appear in the vicinity of northern Caucasus, Afghanistan, Pakistan, and later in India. The name Sarasvati is one such hydronym: It is found in the Helmand area of eastern Afghanistan (*Xravati*), in the IndoGangetic Divide (Sarasvati, Sarsuti), in Utter Pradesh (Sarasvati), even in as far as Bengal (Sarasvati). This fact has a great significance in the discussions on the topic at hand. Opinions differ, and they differ quite widely.

The Vedic Sarasvati has generally been identified with one of the river braids that drain the Swaliks - known in India as Ghaggar and in Pakistan as Hakra. The inferences drawn from the *RgVeda* obviously stand in sharp contradiction to this identification. The difficulty is that the Ghaggar-Hakra, now dry except in the rainy season when it flows some distance, is too petty a stream to fit the picture of a great river that the *RgVeda*'s verses cited above suggest. We shall consider how this contradiction has been sought to be overcome but for now we stick to the identification of Sarasvati as a physical river on earth.

The Sarasvati in the Aryan-Harappan debate: Indo-European linguistics have established a formidable evidential consensus on the lished a formidable evidential consensus on the 43). However, other aspects of the Aryans remain a matter of conjecture and controversy. There is no consensus on the claim of an original Aryan homeland and an original porto-Indo-European mother language, or on theories about the dispersal and movement of the Aryan people. This uncertainty has fostered Hindutva scholarship that challenges the idea of Aryan migration into the Indus Valley and argues that the Aryans are indigenous to "India" (44-51).

In the case of the Harappans also, there is a sizable archaeological record that provides rich evidence about their material existence, but no undisputed empirical evidence about the language they spoke and their religious and social life. Only circumstantial evidence is available which has led to a large scholarship based on assumptions and conjecture (for instance, see Section II). The weak empirical nature of archaeological evidence has provided easy fodder for Hindutva narrative about Harappan archaeology (52-55), facilitating the creation of a new archaeoethnic category - the Vedic Harappans - that combines the literary description of the Vedic texts with the vast material culture of the Harappan Civilisation (56). See the last two chapters for details.

A number of archaeologists and prehistorians have commented on these attempts, exposing the 'evidence' on which the myth of the Aryan Harappans is being fabricated. Ashish Chadha is one of them. His article, *Conjuring a River, Imagining Civilization: Sarasvati, Archaeology and Science in India* (18) is a critical enquiry into the emergence of the 'Sarasvati' as a conceptual category with a powerful political value and an interrogation of its relationship to the Harappans and the Aryans. He delineates the epistemic trajectory of a mythological entity into a hydrological body that was not only resurrected within the disciplinary discourse of colonial geography and postcolonial geology, but was also transformed into a conceptual conduit for the construction of the politically potent and hybrid "Vedic = Harappan" identity, discussed in the last chapter. This is the most comprehensive exposition of this myth so far attempted. We reproduce here the Chadha's article almost in its entirety.

Accounts of ancient India produced in the 19th and early 20th century centered around the Indo-European Aryans. Colonial Indologists had created a historical narrative attributing to Aryans the

birth of Indian civilization. From William Jones' influential work in 1786, which proposed the notion of the 'Aryan race' and 'Indo-European linguistics,' until the discovery of the Harappan Civilization, it was widely believed that the Aryans entered the Indus Valley from the West and settled in the subcontinent. By the 1920s, the Aryan theory of racial intrusion had been buttressed by more than a century of comparative philology and ethnology. The fundamental assertion of this theory was that the Aryans were a superior racial group that occupied the river valleys of the northern Indus plains by vanquishing the weaker indigenous tribes and creating colonies. However, the date of the arrival of the Aryans was an exploratory area of scholarship principally based on a philological analysis of the internal structure of the RgVeda.

We do not have any absolute dates for the composition of the RgVeda; only relative dates are available and these fluctuate between 1700 BC and 1100 BC (32). It is widely assumed that, around this time, the authors of the RgVeda were in the geographical area of the SaptaSindhu - the land of seven rivers geographically located mainly in present-day Pakistan. Therefore the period between 1700 BC and 1500 BC becomes significant because it is only within this small time slot that the Harappans and the Aryans could have overlapped. Similarly, Harappan chronology and categorization is not fixed. However, there is a consensus that there were three major periods or phases. The first was the Early Harappans (3300–2600 BC), followed by the most discernible Mature Harappans (2600–1900 BC) and finally, the Late Harappans (1900–1300 BC). The period of overlap between the Aryans and the Harappans is supposedly the Late Hardpans.

It was Mortimer Wheeler who attempted to fix this contact, albeit envisioning it as a violent confrontation. This revived Gordon Childe's 1926 theory that the 'Aryans were just the destroyers of the newly discovered [Harappan] culture' (58). Wheeler's conclusions were based upon the analysis of skeletons found in Cemetery H in Harappa. His claims seemed objective and definitive for he was able to marshal not only archaeological evidence but also to successfully employ anthropometric criteria to reinforce his proposition. The argument for anthropometric similarities between the skeletal remains in Mohenjo-daro and the southern Indian Dravidian 'race' gained legitimacy, giving rise to the theory of the Dravidian origin of the Harappans. Both these theories attempted to provide a scientific bulwark to the narrative of the invading Aryans on their horses and chariots who decimated the Dravidians and pushed them southward. As discussed earlier, Wheeler's theory was subsequently discredited and the narrative of Aryan invasion was toned down to the idea of Aryan migration - a diffusion model of migrating Aryans interacting with indigenous settlers.

In addition to debates about the exact moment of interaction and its sociopolitical character, the question of the physical location of contact has been at the center of the Aryan-Harappan debate. It is here that the Sarasota River comes into play. Until 1947, the major archaeological sites of the Harappan Civilisation had been chiefly located on the banks of the Indus River and its tributaries; however, following extensive exploratory work in Haryana, Rajasthan and Gujarat, quite a few Indus sites were discovered in India by the 1990s (41). All these sites were at a considerable distance from the catchment area of the Indus (200 to 500 km away) and were located in the arid zones of Saurashtra and Kutch in Gujarat and the semiarid region of northern Rajasthan and Haryana in India and Bahawalpur in Pakistan. Large clusters of these sites were situated on the dry paleo-channels of the Ghaggar-Hakra basin in India and Pakistan.

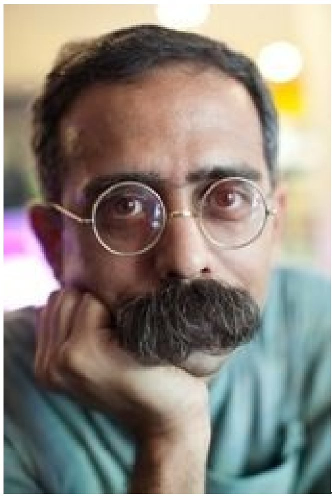
It is this monsoon-fed Ghaggar-Hakra that has been suggested as the *terra-firma* manifestation, the core area, of the RgVedic Sarasvati. The endeavor has been to fit the literary, social and religious

imagination of the Vedic Aryans with the monumental material manifestations of the Harappans, giving birth to the category of the “Vedic Hardpans” living on the fertile plains of the Indus and the ‘Sarasvati’. These discoveries and subsequent archaeological excavations were responsible for the idea of renaming (in some Indian archaeological circles) the *Indus-Sarasvati Civilization* or the more Sanskritized *Sindhu Saraswati Sabhyata*. This was the substantial departure of the earlier identification recognized by all archaeologists and prehistorians. John Marshall, Director General of the Archaeological Survey of India (1902–1928), had earlier used the term ‘IndoSumerian’ to signal the cultural relationship between the Indus and the Sumerians. However, in 1931, he adopted the term ‘Indus Civilization’. Ernst Mackay who had excavated both Mohenjodaro and Chanhu-daro called it ‘Harappa Culture’, following the archaeological type-site convention of naming a culture/civilization by the site where it was discovered for the first time. This term was subsequently made popular by Stuart Piggot in his *Prehistoric India to 1000 B.C* (59).

Colonial Indology and the birth of the Sarasvati: For the seers of the RgVeda, the Sarasota River was *ambitame, naditame, deviate*‘
- the best of mothers, the best of rivers, and the best of goddesses’. The term Sarasvati epitomized both a riverine body and a magnanimous feminine divinity - a polysemic characterization that in the complex etymological universe of Vedic Sanskrit has multiple meanings and connotations depending on the context of the usage. One frequent analysis showed that the term Sarasvati occurs around sixty-eight times in the RgVeda, fifteen times more than the frequency of the term Sindhu (60). Eloquently and evocatively described in the RgVeda as a grandiose river, the Sarasvati is often referred to as that water body that rushed from the mountains to the ocean (61).

Throughout the 19th century, the inscription field of colonial epistemology consisted of a small group of journals along with books about India being published in Calcutta, Bombay, Madras and London. Almost all administrator-scholars of early colonial India in the late 18th and early 19th century published in the *Asiatick Researches* the prestigious journal of the Asiatic Society, first issued in 1788 and widely circulated in Europe soon after (42). *Asiatick Researches* was modeled as the journal of a learned society of colonial gentlemen and published papers of extraordinary diversity. Cartographers, linguists, archaeologists, surveyors, doctors, biologists, botanists, physicists, travelers, numismaticians, ethnologists and philologists came together in the *Asiatick Researches* to form the spheres of colonial epistemology. It is in this inscription field that Sarasvati as a geographic entity surfaced.

The search for this ‘lost river’ began with the interpretation of the much-celebrated *nadisukta* by a French Indologist, M. Viven de SaintMartin, who in 1860 suggested that this hymn ‘must have been composed, or technically seen, after the arrival of the Vedic Aryans on the banks of the Sarasvati’. The notion of the river as a physical geological body occurred as a literary insight within the disciplinarian discourse of colonial epistemology. The topographic interpretation

**Ashish Chadha**

of Vedic literature in order to construct a sacred geography of ancient India was of considerable interest to colonial Indologists in the early 19th century as, one after another, Vedic and Puranic texts were being translated into European languages. By the late 19th century, articles about the 'lost river of the Indian desert' made appearances in the inscription universe of colonial scholarship. Hypotheses about various dry riverbeds in western India were postulated, the GhaggarHakra as the RgVedic Sarasvati were one of them. Sotra and Nara and their hydrological relationship to the rivers Indus, Yamuna and Sutlej in the present regions of Sindh, the Punjab, Haryana and Rajasthan were considered. For instance, C.F. Oldham in his 1874 article '*Notes on the Lost River of the Indian Desert*' argued that it is the Sutlej and not the Ghaggar or the Sarasvati that is the lost river of the desert, whereas in a later article he put forward the Ghaggar as the RgVedic Sarasvati. Nearchus in his '*The Lost River of the Indian Deser*t' talked of a mythic river called Marut Bredha and suggested that this river did not reach the sea but ended its course in the Indus. While most of these articles provided incongruent views, a general consensus seemed to be arising that the Ghaggar-Hakra riverbed system must have been a formidable hydrological body when the Aryans arrived; however the association with the RgVedic Sarasvati was, at best, speculative in these articles (18).

By 1905, colonial archaeology in the form of the Archaeological Survey of India within Lord Curzon's larger vision of India as 'a single scientific enterprise' (62) had transformed into a formidable organization of colonial governmentality. The Archaeological Survey of India was involved not only with the conservation of Indian heritage but it also embarked upon the scientific excavation of archaeological sites. In the early 20th century, the Survey was a bureaucratic conglomerate of the various investigative modalities of the colonial government. On the one hand, the Archaeologial Survey of India was an instrument of survey that scientifically discovered, excavated and classified India's past and, on the other, it was an agency that provided empirical evidence for the construction of an ideological history of India's past through the analysis of architectural remains, epigraphical inscriptions and archaeological excavations. The discovery of the Indus Civilization in 1924 under John Marshall, the Director General of the Archaeological Survey of India (1902–28), was a product of the Indological imagination of colonial scholarship, the developing scientific framework and the bureaucratic efficacy of the colonial Survey.

This discovery sidelined scholarly interest in the Aryans and the Vedic period as colonial archaeologists focused on correlating Harappan material culture with other western Bronze Age civilizations. Instead of the Aryans, the Harappans became the new ethnic link between India and the West. For example, Rakhaldas Banerji, the discoverer of Mohenjo-daro, was comparing artifacts found in Mohenjo-daro with Minoan artifacts in 1923 (63). Within weeks of the publication of

Marshall's discovery, it seemed certain that the Harappans were in contact with the Mesopotamian civilization. The Aryans, who colonial Indologists had politically subsumed within their racial ideology, were further eclipsed because in the public imagination of a nation resisting colonial domination, the Harappan Civilization provided India with a chronology that predated the Aryans by at least a millennium. Evidentially, the historicity of narratives in Sanskrit literature had always seemed questionable. More often than not, Greek sources - literary and numismatic - were used to delineate the chronology of ancient India. Thus, the discovery of a formidable archaeological record of the Harappan Civilization eclipsed the already suspect historicity of Sanskrit literature and consequently diminished the scholarly obsession with the Aryans without altogether obliterating it.

However, the Sarasvati had not completely disappeared from the world of Indological scholarship. In 1927, a German scholar of IndoIranian languages argued that the term Sarasvati was a cognate of old Iranian *Harahuvatii* and referred to a cosmological water divinity *Aredvi Sura Anahita* in the Avesta. This led to the identification of *Harahuvati* with the river Helmand in Afghanistan and by default to the Sarasvati. This hypothesis did not find many takers, for the Helmand does not enter the sea, but drains into a marshy area - nonetheless it is still a theory that is ardently pursued by some and, as described earlier, passionately advocated by Rajesh Kocchar (19). In 1942, Sir Aurel Stein, a British political agent, explorer, philologist and archaeologist, who had been associated with the Archaeological Survey of India since the late 19th century and had conducted extensive archaeological explorations in Pakistan and Afghanistan, declared that the Ghaggar-Hakra paleo-channel was indeed the Sarasvati (64). With this assertion began the next phase of correlations of dry riverbeds with the Sarasvati.

In 1924, when Marshall came across the first archaeological evidence of material culture at Harappa and Mohenjo-daro, he located these two sites within the hydrological realm of the Indus, thereby positing a river as the centre of the civilization. Like his fellow archaeologists of the time in Mesopotamia and Egypt, he interpreted the archaeological finds at Harappa and Mohenjo-daro as a civilization within the fluvial confines of a riverbed. The Indus was to the Harappan Civilization what the Nile and the Euphrates were to the Egyptian and Mesopotamian civilizations, respectively. The river was central to this civilizational imagination along with writing, monumental architecture, urbanism, fortifications, long-distance trade, craft specialization and social stratification. But the unquestioned domination of the Indus as the center of the Harappan Civilization was challenged by the discovery between the 1950s and 1970s of Harappan sites that lay far beyond the Indus basin both in Pakistan and the adjoining areas of India.

Postcolonial Geology and the Birth of a Nationalistic Frenzy: Till 1947, less than forty Harappan sites were known (65), of which only two were in India - Kotla Nihang Khan in the Punjab and a suspect site of Rangpur in Gujarat, the rest were in Pakistan. The loss of Harappa and Mohenjo-daro represented the biggest blow to the organizational morale of the postcolonial Archaeological Survey of India, since these sites had constituted the professional core of the Survey in the last decades of its colonial legacy. This situation forced the Archaeological Survey of India to reevaluate the archaeological heritage that came under its purview and by the early 1950s, it began a systematic exploration of the western states of independent India. This exploration was a followup to Stein's work and was meant to compensate for the loss of nearly all the Harappan sites to Pakistan and reestablish the preeminence of post-Independence India as an ancient civilization. Significantly, Rafique Mughal's exploration in Cholistan adjoining the Thar desert on the bed of the Hakra along with the discovery of Harappan sites in Baluchistan and western Sindh was also responsible for this

shift (66,67). These discoveries, along with the excavations of the Harappan sites of Lothal, Kalibangan, Surkotada, and Banawali over the decades by the Archaeological Survey of India as well as the excavations of Harappa, Kot Diji, Mehrgarh, Nausharo and Sutkagan Dor in Pakistan, further undermined the thesis of the Indus as the hydrological center of the Harappan Civilization.

By 1984, more than 1000 “Harappan sites” were discovered due to the extensive exploration efforts of the Archaeological Survey of India, the Departments of Ancient Indian History, Culture and Archaeology at the Universities of Kurukshetra and Baroda, Deccan College (Pune) and the State Department of Archaeology in Gujarat along with independent scholars, almost all of them indigenous Indians. Most of these sites were Late-Harappan, even post-Harappan, some even not having any relationship with the Harappan Civilization beyond a sherd or two from that culture. But no one seemed to question the misplaced nomenclature. These ‘discoveries’, while restoring the losses of Partition, also shifted the locus of the Harappan Civilization away from the Indus Valley to a larger geographic area as far as the Indo-Gangetic Divide in the East to Saurashtra in the South. For the Indian archaeologists and their students the Indus had lost its preeminence as the riverine center of the Harappan civilization. Soon, the Ghaggar-Hakra as the Sarasvati was being promoted as the “coeval hydrological center” of the civilization. This occurred with the discursive intervention of another postcolonial science - geology - equipped with a powerful technique of representation from several different scientific disciplines. Soon the identification of the Ghaggar-Hakra as Sarasvati became an accepted fact of academic life and a fertile ground of fantastic musings of the Vedic scholars.

Sarasvati: A Lost River or a Myth? In order to examine the validity of these claims, let us, first of all, recount the facts about the river, which is sought to be established as the Vedic Sarasvati. There is a flat, shallow and very wide braid-like river called Ghaggar in its upper segment (mostly within India), and Hakra in its lower part now in Pakistan. It is born in the Sivalik hills and receives rain water in the upper catchment area. It is, therefore, an occasional river, more or less dry throughout the year except in the rainy season. A visual examination of the L A N D S A T satellite images obtained during 1972-79 shows that in some unknown past the river Sutlej used to flow Southward, while the river Yamuna originally flowed Southwest, both of them feeding the river Ghaggar at Shatrana 60 km south of Patiala. It may be recalled here that a geologist R.D. Oldham, had also speculated such a possibility in 1886. Sir Aurel Stein, a reputed archaeologist, who had also studied the entire northwestern subcontinent in the thirties and forties, wondered whether Sutlej and Yamuna were once the two tributaries to feed the Ghaggar-Hakra with round the year supply. It is this idea which has been seized by some scholars in India who now deem it fit to claim that this Yamuna-Hakra palaeochannel represents the so long lost river Sarasvati and conforms to the Rigvedic description. But does it really fit? What is more, does it fit with the longheld Vedic tradition?

The first thing to note is that all the other rivers mentioned in Rgveda have been extant at least for the last 3,500 years. It is only the biggest and the strongest of them, the Sarasvati, which got lost in the Thar Desert. It is possible but is it conceivable? It is one thing to say that rivers often change their courses, and so may have been done by the Sarasvati; it is completely different thing to say that the river has been lost in the deserts. For so big a river as the Rigvedic Sarasvati to exist and then perish, it requires a major geological event. However, such an event would have affected not only the Sarasvati but the entire riversystem of the whole region. As far as our knowledge goes, there is no such report for the last, say, 10,000 years, let alone the late-Vedic period.

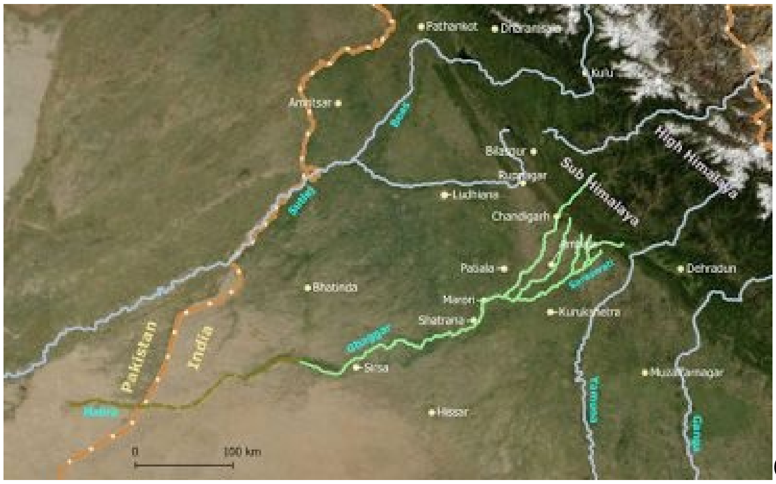
Secondly, in the geological sciences there are well-defined methods of determining the period in which a certain riverbed was active. No such study is known to have been carried out in the Ghaggar-Hakra paleochannel, without which there is no scientific basis of claiming that the river was active within the past 5,000 years. However, certain geological indicators point to the logical possibilities. According to some research data, all the major rivers of northern India (and Pakistan) have been flowing more or less in their present channels (within their meandering belts) for the last 30,000 years (101).

Thirdly, it is interesting to note here that Ptolemy, the Alexandrian historian of the 2nd century A.D.,mentioned all the important rivers of this Indus-to-Ganga region but quite significantly there is no reference about Sarasvati. This implies that at least by that time there was no such big river in the region.

Lastly, there is a strong cultural-historical argument. Let us suppose that the dry bed of the Ghaggar-Hakra represents the remnants of the river Sarasvati. and this Sarasvati was supposedly associated with all the cultural ethos of the Vedic people, it is quite natural to expect that the river, although no longer as powerful as earlier, should at least preserve its nominal title as such to the adherents of Vedic tradition. Is it not, therefore, strange that during the entire postVedic era of nearly three thousands of years up to now, Sindhu remained Sindhu, Satadru remained Satadru, Yamuna remained Yamuna, Ganga remained Ganga, but the most important river Sarasvati became Ghaggar? Moreover, if it is kept in mind that many minor rivers in different isolated parts of India have been given the name Sarasvati by the Hindus out of a religious nostalgia, is it not very peculiar that they should rename the original Sarasvati into a desanscritized drab title of local dialect? C. F. Oldham also was bothered by this peculiar fact: “How the sacred river came to lose its own name and acquire that of its former tributary is not known” (102).

It is this absence of any material evidence or cultural tradition that prompted many historians and archaeologists - both Indian and foreign - to conclude that the word “Sarasvati” is not actually a noun but an adjective which qualified a river evoking strong sense of respect among the Vedic tribes (103).They point out the fact that the Sanskrit word Sarasvati can be split into the following two parts: saras (sarah = water) + vati (= filled with), which indicates the meaning of qualifying something as being full of water. It can also be used as an adjective. These scholars therefore argued that the Rgvedic tribes had probably adored the majestic river Sindhu (the Indus) as Sarasvati, i.e., as a river with large dimension. With the passage of time, we may further surmise, the later generations of the Vedic tribes who gradually moved eastwards and southwards and settled on the banks of diverse rivers in Punjab and the Divide, carried with them a popular and collective memory of the Sindhu or any other river which they have been calling Sarasvati in the area of their past and renamed some of these rivers after their nostalgic memories. Thus, quite a few rivers, including the one under discussion, were named ‘Sarasvati’ all the way to Bengal.

In this connection another interesting fact



Ghaggar-Hakra drainage system (seasonal) of which "Sarasota" is supposed to be a mighty tributary

needs be recalled. Associated with the RgVedic exhortations of river Sarasvati is a post-Vedic and Puranic tradition over 'vinashan' (disappearance) of Sarasvati. In the Mahabharata and other contemporary texts it is said that Sarasvati, after entering the kingdom of the Nishadas, the lower caste of the brahmanical era, felt embarrassed and went under ground in the sands (14). This legend also seems to support the above hypothesis. In order to sustain the myth of existence of the Sarasvati in face of its non-reality, it was necessary to generate another, complementary myth which would explain away the visible nonexistence of the river to boost up Hindu religious sentiments and prejudices over some of the sensitive areas of Indian history.

Climatic, Hydrological, and Geological Arguments: For many years supporters of the Hindutva view were using a combination of the RgVeda and archaeology as evidence that the Ghaggar is the Vedic Sarasvati. Lately though a different kind of evidence has been brought to bear on this problem - the geological history of the Ghaggar. If geological evidence shows that the Ghaggar was in the past a mighty river and one that had a glacial source, it would fit descriptions in the RgVeda of a large Sarasvati flowing from the mountains to the sea. More importantly it would allow Hindu religious groups to claim that the Vedic people were present in Pakistan and Northwest India much before the Ghaggar dried up about 1800 B.C. That would strengthen their claim that the Harappan Civilization represents the beginning of Vedic civilisation in India. To that end a lot of effort has been undertaken to generate and collect geological data that supports this view. This data comes in four flavors: climatic, geomorphologic, petrological and geochemical. Supporters claim that taken together these four types of data show beyond doubt that the Ghaggar is the Vedic Sarasvati.

Let us turn to this evidence. In 1971 Gurdip Singh published a paper analyzing results from pollen samples from beds of four lakes in Rajasthan, arguing that when duly carbon-dated these indicated the saline and freshwater phases of the lakes, which in turn could correspond to phases of low and heavy rainfall. The palynological research was concentrated subsequently at the Didwana lake. The results, as published in 1990, did not exactly correspond to the earlier findings, but still suggested that Holocene had three phases here: (1) arid up to 5510 BC; (2) wet, from 5510 to 2230 BC; and (3) arid, again, thereafter. This immediately became the basis for the claim that the Sarasvati River contracted to its present puny size only when Gurdip Singh's wet phase ended at 2230 BC; before that it was a mighty river corresponding in length and volume to what the *RgVeda* should make us expect of it. This evidence thus was thought to provide proof not only of the past glory of that river, but also of a greater antiquity of the *RgVeda* than had uptil now been assigned to it.

One needs to point out that Gurdip Singh's findings are by no means the final truth. Possehl notes that the radiocarbon dates are not sufficiently numerous to form a firm basis for the chronology though he accepts the sequence of the three phases. And when the same procedure was followed in the salt basins of Pachpadra and Thob in Rajasthan, the pollen analysis did not even disclose such a sharp dry-wet-and-dry sequence. It rather indicated evidence of such changes as could simply result from erratic rainfall characteristics of desert terrains.

Even if we are to assume, for purpose of argument, that there was heavier rainfall, *ca.* 5000 to *ca.* 2000 BC, such as to reduce salinity in the north Rajasthan lakes, one should remember that this would have affected the catchment area not only of the Haryana streams, but also of all the rivers of the Indus system and of the Yamuna and Ganga as well. If so, how could the Sarasvati alone have become preeminent over the great Himalayan rivers whose waters would also be augmented by much larger rain-fed drainage. Even among the small Haryana rivers, the Sarasvati would not be preeminent, since the Ghaggar and Chautang, being larger than it, would also have received a proportionately greater or lesser supply of water. We would not, therefore, be anywhere nearer the "mighty" Sarasvati.

As doubts about any long regime of much higher monsoon rainfall in middle Holocene grew, there was a revival of the old alternative assumption for the supply of large volumes of water into the Sarasvati, viz., its capture of the Yamuna and the Sutlej during the same phase of Holocene. This renewed effort was initiated by two articles, one by Yash Pal, et al. (76), using Landsat maps, published in 1980, and the other by V.N. Misra (77), invoking mainly the archaeological and literary evidence.

During their lifetime, rivers meander and cut new channels. The older abandoned channels can be seen in satellite images as dark curvilinear features. This technique of using images to delineate channels has spurred a lively industry of Sarasvati mappers to trace a maze of paleochannels surrounding the Ghaggar and extending into the Thar Desert. These traced maps are then used to claim that in the past the Ghaggar had a lot more water in it and that some of these channels represent the Sutlej River which according to them used to flow into the Ghaggar but has changed course and joined the Indus only in recent times. A common element of all these claims is to emphasise that these paleo-channels are as wide as 8-10 km, an indication of a very large river.

There is some real data buried amongst these exaggerations but, as detailed below, it does not support the main claim which is that the Sutlej was a tributary of the Ghaggar. No such large channel has been convincingly demonstrated as the Sutlej. And the figures of 8-10 km wide channels are misleading. What has been mapped are the flood plains and channel system. Flood plains of rivers are very wide and appear dark in images because they contain sediment with higher amounts of moisture. This does not mean that the active river channel at any one point in time was very wide. So the evidence from ancient drainage patterns show that the Ghaggar changed course several times in the past and contained more water than it does today. It doesn't show that the Sutlej or for that matter the Yamuna were tributaries of the Ghaggar.

There are channels running south from the Sutlej around Bahawalpur leading to the Hakra. If we assume that one or more of these channels at any time served as the main bed of the Sutlej, it would still have met the Ghaghar/ Hakra so far below the modern Sarsuti so as to make any possible connexion with the RgVedic Sarasvati out of the question. Moreover, there is no reason to believe that these channels at any time carried the mainstream of the Sutlej at all; they could just as well have been

carriers of Sutlej flood-waters, without pretending to mainstream status. It should be recalled that in the *RgVeda*, III.33.1, the Vipas and Sutudri are paired together
- "like two bright mother cows, who lick their youngling, Vipas and Sutudri speed down their waters". If the Sutlej was then running westward to join the Beas, as it does now, there could be no question at least in RgVedic times of its turning in the opposite direction to run into "Sarasvati".

The Landsat' satellite images do provide synoptic multi-spectral and multi-temporal data and have powerful scientific legitimacy. These are composite images which show paleo-channels in eastern Indus basin from the Siwaliks to the Rann of Kutch. But it needs to be recalled that the Landsat's imaginary and its results in respect of the possible past connexions of the Desert River with both the Yamuna and the Sutlej go only a little way beyond what had already been observed on the ground from the nineteenth century onwards. After all, Landsat imagery too marks out 'paleo-channels' by scanning drainage scars, distinct tone, texture, surface manifestations like younger alluvium and concentration of vegetation. Broad coincidence between Landsat imagery and field-survey is thus to be expected. But neither visual observation of a line of depressions or a band of different kind of alluvium brought out by Landsat imagery gives us the time when the river courses so discerned were active. One has thus a huge range of time to choose from, right from the beginning of Pleistocene, some 1.8 million years ago to 3000 BC. That the courses traced belonged to Holocene, beginning some 10,000 years ago, has a proportionately smaller likelihood, unless these are established by geology's own resources. Of this, however, later.

For the moment, it is worth noting that even if what Yash Pal and his colleagues choose to call the "Lost Sarasvati River" is seen as they wish it to be seen, a river carrying the Yamuna and Sutlej as its `tributaries', the problem of the RgVedic Sarasvati is still not solved. In *Rigveda*, X,75:5, the Yamuna, Sarasvati and Sutlej are recognized as three distinct rivers, so that the two Himalayan rivers already bore the names by which we know them. The Yamuna is supposed to have had a western course, running into either the modern Sarsuti (the supposed Sarasvati proper), designated Y-1, or into the Chautang or Chitrang, designated Y-2. In the first case if the Yamuna with its waters occupied the bed of the Sarasvati, it should have surely retained its own name; and the Vedic Sarasvati, then, could not have existed at all. On the other hand, if the Yamuna ran in the Chautang, then, whatever happened to Drishadvati, which too is a genuine RgVedic river and which everyone keeps on identifying with the Chautang?

Even if we leave the Drishadvati to its fate as a homeless ghost, how would anyone have called the Desert River by the name of Sarasvati, when the Ghaghar (of which modern Sarsuti is a tributary) could hardly have contained water to compare with that of the Chautang bed carrying the Yamuna, at the point of junction between them? It would be the Yamuna, not the Sarasvati, that should, then, have run parallel to the Indus. Again, in case the Sutlej had taken a southern turning at Rupar to flow straight into the Ghaghar, it would then be the Sutudri that the Ghaghar would be called, and not Sarasvati, an insignificant rain-fed seasonal stream on its own.

Similarly, after the Yamuna, flowing through the Chautang channel joined the Sutlej, the united river could carry either river's name, but the Sarasvati would have no place here. By throwing either the Yamuna or the Sutlej or both into the Desert River, one can provide the latter with sources in the Himalayas, but this still cannot be what is devoutly wished for - a river called Sarasvati, to enable one to describe it as "a mighty perennial river from the Himayala to the Arabian Sea". The words quoted come surprisingly from a geologist, who seems to forget the ordinary principles on which people

give rivers their names. We must, therefore, surely appreciate Kochhar's warning that, in order to be credible, the geologists "should depend entirely on their own sources of information" and not try to import into geology what they believe is the teaching of either archaeology or literature" (19).

When geologists pursue their own methods, they appear to reach quite different conclusions. Thus one way of testing the thesis of a westward course of the Yamuna would be to dig up the soil of that probable course and see if the soil at some level below matches the Himalayan detritus and alluvium that deposits from the Yamuna should contain. An Indo-French team carried out explorations of the hydrology of the Ghaghar plain in 1983-87, and Marie-Agnes Courty has published a series of papers since then. She reports that alluvium from a large river was not found down to the depth of 8 meters below the present floodplain, thus showing that there has been no intrusion of the Yamuna into the Haryana plain since early Holocene (104,105).

This should be definitive; but if any doubts remain, these should be dispelled by the failure of the Yamuna to take a southwestward course even when cuts were made. Furthermore, an extensive study of the statigraphy of Yamuna channel (106) has concluded that the Jamuna River has been confined within its own valley having prominent floodplain and well-developed newer alluvium plain throughout the Holocene and, as such, it could not have flowed westward (viz. Into the Ghaggar) at least after beginning of the Holocene. Another recent study (107) has concluded, using both satellite images and ground data, that the small, rain-fed river Sarasvati of northern Haryana (the easternmost tributary of the Ghaggar flowing from the sub-Himalayan Siwalik hills, and deriving its name from Sanskrit Sarasvati) never had any linkage with the Jamuna.

The second type of evidence for the Vedic Sarasvati is based on the sediment composition found in the Markanda and Somb, tributaries of the Ghaggar originating in the Siwaliks. A few years ago V. Puri, a glaciologist who had been working on the Markanda river sediments announced (68) that he had found pebbles composed of high grade metamorphic rocks in some of the river terraces that were around 5,500 years old. He argued that since the Markanda River today flows only through the sedimentary rocks of the Siwaliks, the presence of metamorphic pebbles means that in the past the Markanda River was receiving sediments from streams draining a metamorphic terrain and that source was cut off sometime later. He identified this source metamorphic terrain as the Jutogh formation of the high crystalline glacial Himalayas. This, he said is irrefutable evidence that the Ghaggar had a glacial source in the past, fitting the description of the Vedic Sarasvati.

This analysis, however, ignores the complex sediment distribution patterns which are in play in Himalayan style collisional basins. The Siwaliks may be sedimentary but they are often composed of pebbles and boulders of metamorphic rocks. When sediments which would in the future become rocks of the Siwaliks hills were being deposited, streams eroding the metamorphic Jutogh formation transported and deposited metamorphic pebbles and boulders in layers known as conglomerates. Later as the Siwalik sediments were consolidated and uplifted as the Siwalik hills a new drainage developed. This drainage represented by the Markanda River started eroding the Siwalik conglomerates and received from them metamorphic pebbles and boulders. This way streams can contain metamorphic pebbles without actually draining a metamorphic source rock. The pebbles have been recycled into the recent streams via an intermediate Siwalik sedimentary source. The presence of metamorphic pebbles is not irrefutable evidence of a glacial source for the Ghaggar. Yet Puri and other Sarasvati supporters continue to present this data as a game clincher.

The third type of evidence is based on the oxygen isotope composition of ancient water in Ghaggar paleo-channels and the strontium and- neodymium isotope composition of Ghaggar sediment. During precipitation, the lighter isotope of oxygen will become preferentially enriched in the vapor phase. As clouds lose moisture and rise from the foothills to high elevations they become progressively enriched in the lighter isotope. Glacial derived water therefore will be isotopically lighter than water from Himalayan foothills. The Bhabha Atomic Research Centre has analyzed groundwater trapped in paleo-channels in Rajasthan identified as belonging to the GhaggarHakra system. The analysis shows that the water is ancient and is isotopically heavier than water from known glacial sources. This indicates that the Ghaggar was never fed by glaciers.

A similar conclusion has been drawn by a separate study using strontium and neodymium isotopes of Ghaggar sediment. Rocks from the high crystalline Himalayas have a typical signature that Ghaggar sediments lack. In 2004, Jayant K. Tripathy and coworkers published a thorough study (82), based on the Sr and Nd isotopic composition of the Ghaggar alluvium as well as Thar Desert sediments, proving without any reasonable doubt that the Ghaggar-Hakra basin was built with a sub-Himalayan sediment source, with no contribution from the glaciated regions, thus negating any contribution from the Yamuna or the Sutlej. Since this study fundamentally questions the theories about the hydrological nature of the Ghaggar-Hakra River, the proponents of SutlejYamuna-Ghaggar theory consistently shy away of its mention in their proclamations.

A recently published paper by Peter Clift and coworkers (86) should also be mentioned here.The researchers provide sources for the headwater sediments in the various rivers of the Indus system based on zircon fingerprinting. These dated sources are in turn stratified in the Pleistocene and Holocene river sequences which have been dated by OSL. The investigated river systems also include the Ghaggar-Hakra river. The results show that while the GhaggarHakra used to be much larger in the Pleistocene, drawing on the headwaters that now feed the Yamuna, the Yamuna had begun to flow east into the Ganges before the end of the Pleistocene, and therefore well before the start of Harappan urban societies. Throughout the Holocene, including the Harappan period, this river was fed only by seasonal monsoon rain in the East. This rainfed Ghaggar-Hakra was active until after 4,500 years ago and was then covered by dunes before 1,400 years ago. What this means is that the Ghaggar-Hakra, unlike any of the major Indus tributaries, was not fed by snow melt, which begins in spring and may be unpredictable, but was entirely reliant on swelling its banks from the summer monsoon.

This also means that it would have been an ideal river for winter crop agriculture, along the lines of the Nile flood regime which is keyed to the Blue Nile's monsoon source, with sowing of wheat and barley in Oct.-Nov. as the monsoon flood began to recede to leave behind a rich floodplain. These could then be left to mature until harvests in March or April, without fear of early snowmelt floods ruining the crops. It really should come as no surprise then that so many Harappan Bronze Age sites concentrated in this valley. Nevertheless as monsoons gradually weakened (already underway during the Harappan period) with the flood water source retreating eastwards, and the Thar desert expanding, the valley became gradually drier and eventually choked with desert sands. This, however happened in Iron Age or post-Iron Age times, so thus there is no basis for correlating any catastrophic shift in the Ghaggar-Hakra with the end of the Harappan civilization - a notion which has often appealed to archaeologists.

We thus see that the claim that the Sarasvati could have fattened on the Yamuna and Sutlej during the time of the RgVeda or any time earlier in the middle Holocene is an extremely dubious one. It is

further irrevocably undermined by the fact that neither on the ground nor in Landsat imagery is there any sanction for the Ghaghar-Hakra River going beyond the middle region of the former Bahawalpur State, for it would be inconceivable that a river like Sutlej (even if unaugmented by the Beas) could just have disappeared in the Cholistan desert without flowing onwards towards the Indus or the Eastern Nara.

It is true that early official small-scale maps used to show the ‘Dry Bed of Hakra or Ghaggar’ run past Derawar in Bahawalpur State and then right down to the Sind border, where it seemed to link up with ‘Raini N’, which ran to a point close to E. Nara, which in turn entered the Great Rann of Kutch near Ali Bandar. This has often been the basis of assumptions about an ancient river, now extinct, running parallel to the Indus. But on the ground there is, in fact, no connexion between the Ghaghar-Hakra and RainiNara. Aurel Stein had drawn attention to the fact that around Derawar "the broad Hakra bed breaks up into an inland delta marked by a number of dry channels spread out like a fan" (78). This, of course, means that the Hakra’s "mouth" lay near Derawar, and the river, when it contained water, had its point of termination here. All lower channels that could have fed the Nara are not continuations of the Hakra, but take off from the Indus flood-plain and probably carried its excess flood waters. Landsat imagery in fact confirms what ground observation had long told us. In the text and map given by Yash Pal, et al., there is explicit indication that the palaeo-channel of the Hakra divides into two as it enters Bahawalpur, the northern one ending near Marot, the southern at Beriwala, and thus both fall far short of even approaching Derawar (100)

One obvious proof that the GhagharHakra did not even have water to take it beyond the middle of the Bahawalpur Cholistan comes from the distribution maps of the protohistoric sites themselves. While the Harappan (as well as pre-Harappan and post-Harappan) sites seem to run in a large belt along the Hakra River, and are especially numerous around Derawar, they just cease here, with only very rare sites below the great settlement of Ganweriwala (79). The pattern of distribution of the Hakra Ware (4th millennium BC), the early Harappan (Kot Diji) and mature Indus sites also give the appearance of being positioned along the deltaic branches of the Hakra; and this makes even G.L. Possehl, a believer in "the Sarasvati system", agree that the "Sarasvati" flowing through the Hakra bed has never, at least in Holocene, flowed past the deltaic fan around Derawar, and so could never have joined the E. Nara to make its way down to the sea (80).

There remains one question to answer. The Hakra and the lower beds of the Chautang and Ghaggar have been dry for centuries. How then did these dry courses have had water that could reach down to Derawar to create a delta there and sustain settlements up to that point? While any regular natural outflow from the Yamuna is most doubtful, any outflow from the Sutlej would, as we have seen, feed only the Hakra and not supply water to the Chautang or Ghaghar. It is possible that sufficient attention has not been paid to the ability of rivers to carry more water for longer distances in conditions where the natural environment was far less affected by man’s handiwork. At the time of the Indus Civilization the Siwalik and sub-Siwalik (Terai) forests would have been denser and much more extensive than now. Below them the scrub and bush would have been far less affected by grazing and agriculture. Both grazing lands and cultivation could then have occupied a very small area compared with later times. All of this must have meant a distinctly higher precipitation than now. But a much greater factor would have been the higher level of underground water, since very little of it would have been drawn out through wells. Finally, the bunds and cuts that man has made as agriculture has extended would have been few, if any. In the 1630’s a Mughal official’s memorandum claimed that the Chautang which had failed to bring water for a hundred years could do so if the bunds upstream were

removed. It is, therefore, possible that, given the earlier natural conditions, the Desert River could come down to the Cholistan, fed by its own rain-fed Siwalik and Terai tributaries. Since that time the contraction of the Desert River has proceeded in rough correspondence to the expansion of agriculture in its catchment area, a process which has levied greater and greater tribute upon its upper feeders and subsoil flows.

Just how and when did the Ghaggar dry up? Here too a belief that the Sarasvati arose in the glacial Himalayas has led to a preference for the tectonic theory of river desiccation over the better supported climate change theory. The tectonic theory says that the Sutlej and Yamuna - both glacially sourced - flowed into the Ghaggar and tectonic events diverted these channels away drying up the Ghaggar/Sarasvati. To date there has been no serious study that has identified a specific location where this deformation took place and no work that has timed any deformation event to show that it was recent enough to have affected Harappan Civilisation. On the other hand climate data collected from dried up lake sediments in the Thar, the deep sea Indus fan and pollen from Himalayan peat all point to an early Holocene wet phase ending around 3500 BC. The Indus Valley began to dry up although eastwards in the Siwaliks the monsoons were still strong. The Ghaggar would have had enough water to support human habitation due to a wetter source area. By 1800 BC the Thar had totally dried up, rainfall in the source region also decreased and the Ghaggar became too dry to support human activity. Drying progressed from west to east, a trend tracked by shifting human settlements. Post-Harappan and Painted Grey Ware sites (1800–400 BC) occur in eastern Thar and the Ganga Yamuna plains. These patterns cannot be explained by a tectonic theory of river desiccation.

Attempts by Sarasvati revivalist groups to use climatic, hydraulic, and geological data to equate the Ghaggar with the Vedic Sarasvati have been compromised by the application of poor science and sins of exaggeration and omission. The above discussion amply shows that most of the scientific clues negate such a proposition. A final blow comes from a multi-disciplinary study (83), undertaken by an international team of experts and headed by Liviu Giosan. It uses a combination of high resolution topographic data, geomorphologic analysis and sediment dating to establish a chronology of the evolution of fluvial landforms of the Indus and its tributaries It also includes the region of western Doab and the Ghaggar-Hakra region. In view of its relevance to the present discussion, we chose to summarize it in the followings.

Fluvial Evidence: Contrary to the general belief in the dry/wet/dry climatic scenario, obtained from the above cited Gulp Singh data, the paleo-climatic research of Enzel et al. has shown that the Thar had started to become arid by 4800 BC (81), more than a millennium before the Early Harappan phase (3300–2600 BC). This suggests that Harappan culture must have risen and fallen in semiarid climatic conditions similar to the present day. Ghaggar-Hakra may have been a powerful hydrological body when aridity had not set in the greater Indus Valley (i.e. before 4800 BC), but much before the emergence of the Harappan Civilization. Furthermore, archaeological and geological research has shown beyond doubt that a significant portion of the Harappan Civilization was situated in the Ghaggar-Hakra region. But this was not because of a perennial river flowed in this area. The Hakra riverbed was already dry by this time and not a mighty river, as the proponents of the Sarasvati seem to argue.

This has been recently confirmed by a large-scale, multidisciplinary research, conducted between 2003 and 2008 in Pakistan, from the coast of the Arabian Sea into the fertile irrigated valleys of Punjab and the northern Thar Desert. The international team included scientists from the U.S., U.K.,

Pakistan, India, and Romania with specialties in geology, geomorphology, archaeology, and mathematics. By combining satellite photos and topographic data collected by the Shuttle Radar Topography Mission (SRTM), the researchers prepared and analyzed digital maps of landforms constructed by the Indus and neighboring rivers, which were then probed in the field by drilling, coring, and even manually dug trenches. Collected samples were used to determine the sediments' origins, whether brought in and shaped by rivers or wind, and their age, in order to develop a chronology of landscape changes. The study was conducted under the sponsorship of Wood Hole Oceanographic Institute, and reported by Giosan and coworkers in PNSA (83).

The Harappan civilization over a 600 year period from around 4500 to about 3900 years ago flourished in this region and then went into decline with urban centers abandoned and populations moving eastwards towards the Himalayan foothills and the Gangetic plains. The work of Goisan et. - and there is also independent evidence for this - shows that this 600 year period was a kind of a Goldilocks period. The region became arid, but not too arid. At the front end of the increasing dryness (less rainfalls) it was ideal for human settlement along the riverbanks (less floods) while at the backend the subsistence conditions became so unfavorable (less water) that the Harappan Civilization collapsed, resulting in the abandonment of settlements and population movement eastward.

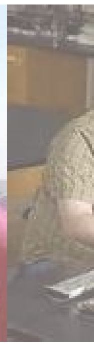
Indus and its tributaries get water from two climatic regimes, the summer monsoons from the Arabian sea and winter rains from the northwesterly winter disturbances bringing moisture from the Mediterranean, Caspian and Black sea region. Most of the sediment load of these rivers is generated during the heavy erosion that takes place in the Himalayas during the summer monsoons. When rivers carry and deposit sediment along their course they are said to be in an aggradational mode i.e. the stream bed and the surrounding floodplains get raised as more and more sediment is deposited.

Over much of the earliest part of the Holocene, the Indus and its tributaries were aggradational. Then the monsoons weakened and the sediment load reduced. Winter rains falling as snow though kept river discharge active. Rivers without sediment or less sediment incise or cut into their own deposits. So, by mid Holocene all these rivers had developed a characterized profile of incised valleys and river terraces marking the original river bed and broad surrounding plains

that because of reduced rainfall were less prone to severe flooding.

Giosan et.al suggest that the Harappan people took advantage and adapted to these circumstances. There are Harappan and even preHarappan sites within these incised valleys of the Indus and its tributaries like the Beas and the Sutlej. This suggests that incision had occurred in the early Holocene and agriculture evolved to take advantage of manageable floods and a perennial water supply within the valleys and adjoining plains.

After around 3900 years ago the aridification intensified. The agricultural heartland of this civilization was along the Ghaggar/Hakra River,



Liviu Giosan

located between the Sutlej and the Yamuna. This river was monsoonal fed and would have been perennial until then. As it slowly dried up, urban population centers could not be sustained and the Harappan civilization went into decline. There was a movement of people to the East towards the wetter Himalayan foothills.
This study also lends additional support that the Ghaggar river which has been identified as the mythical

Saraswati River mentioned in the RgVeda was not a glacial river in the Holocene. It has been proposed that the Sutlej and the Yamuna flowed into the Ghaggar and changed course around 4000 to 3900 years ago, triggering a water crisis. This study points out that the landforms of incised valleys typical of these glacial rivers are not present across the Ghaggar Hakra region. Sediment dates of river terraces along the Sutlej also indicate that the Sutlej had incised and was flowing along its present course by late Pleistocene.

Work by Clift et.al, (86) referred to earlier, using zircon dating to fingerprint sediment and Himalayan catchment areas of these rivers, indicates that although the Sutlej and Yamuna likely did flow into the Ghaggar in the Pleistocene they changed course towards the Indus and the Ganges by late Pleistocene, thousands of years before civilization was established in this region. And there is some independent isotope studies on ancient water in buried channels along the Ghaggar that also suggests that there were no glacial rivers flowing into the Ghaggar during the Holocene.

It has also been pointed out that glacier rivers like Sutlej and the Yamuna have developed a characteristic morphology of a relatively narrow belt of incised valley and terraces. As has been suggested, if such large perennial rivers were flowing across the plains of Punjab in the upper reaches near the Siwaliks and joining the Ghaggar they would have prevented the formation of the alluvial fans systems that have developed in the upper reaches of the interfluve areas around Ghaggar.

That the Sutlej or Yamuna may have flowed into the Ghaggar in the past is a perfectly reasonable geological hypothesis. But until these recent studies by Clift et.al and Giosan et. al. there was no

convincing evidence for it. Earlier, geological evidence of a glacial Ghaggar/ Saraswati has been based primarily on the satellite mapping of dried up channels near the Ghaggar River which indicated that in the past the Ghaggar was a bigger river. But, these channels were never shown to be connected to the present day glacially connected Sutlej and Yamuna basins. They could just as well be interpreted as belonging to a monsoon fed river originating in the lower Himalayan ranges. Nor was there any firm sediment provenance that could identify a specific Himalayan source for these channels or a sediment chronology to establish the long term fluvial history of this region.

Paleobotanical and sedimentological criteria had always indicated that increasing aridification and reduction in monsoon strength better explained the drying of the Ghaggar around 3900 years ago Despite all this, the Sutlej or the Yamuna changing course at around 3900 years ago became the favored explanation for the drying of the Ghaggar. This scenario of a once large Ghaggar neatly fitted the description in the RgVeda of a mighty Saraswati, a holy river that just like the Ganges was thought to have its source in the high glacial Himalayas. One suspects that the glacial river theory had more emotional appeal and gained acceptance among some geologists.

The study is somewhat involved and wide-ranging. Nevertheless, the following can be stated in context with the subject under discussion:

(1) The geological evidence - sediments and topography - shows that the Indus Valley rivers were sizable and highly active throughout their history. This is evident from the wide incised valleys and interfluvial (the land between the water flows) ridges that have been created by these active water flows. The following topographic map shows these incised valleys for the Indus and its tributaries. A similar landscape is obtained for the Ganga and the Jamuna where the interfluvial ridges are observable and the incised valleys are clearly indicated. However, there is no evidence for such wide incised valleys and hydrologically produced mega-riges in Indian Punjab and Hary

ana like those created by the Indus rivers or those created by the Ganga and the Jamuna, all of them glacier-fed. The study argues that these crucial differences prove that the Ghaggar-Hakra was not Himalayan-fed, but a perennial monsoonsupported watercourse, and that increasing aridification gradually reduced it to short seasonal flows.

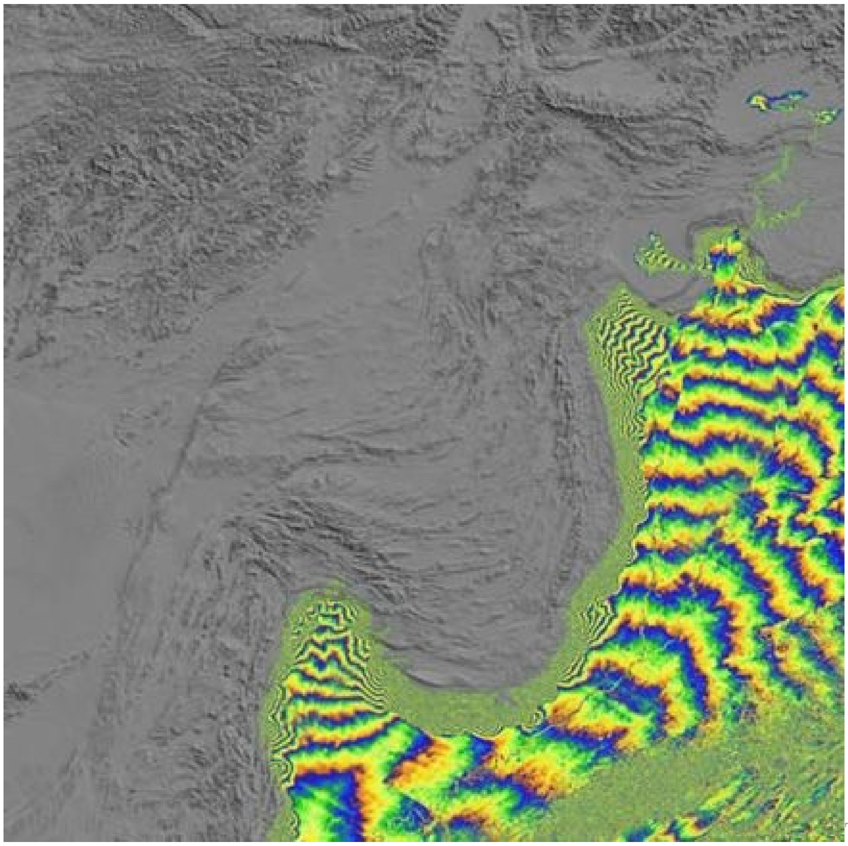
(2) The fluvial scars that have been mapped by several land surveys and later adduced from Landstat data in the east of the Indus are often offered as a proof of a lost river, presumably the Vedic Sarasvati, that flowed through the Ghaggar-Hakra basin all the way to the Runn of Kutch and emptied into the Indian ocean. The data collected by Giosan and his team, however, being its potential source (87,88), the lack of large-scale incision on the interfluve demonstrates that large, glacier-fed rivers did not flow across the Ghaggar-Hakra region during the Holocene.

(3) Giosan team recovered sandy fluvial deposits approximately 5,400 years old at Fort Abbas in Pakistan, and recent work (90) on the upper Ghaggar-Hakra interfluve in India also documented Holocene channel sands that are approximately 4,300 years old. On the upper interfluve, fine-grained floodplain deposition continued until the end of the Late Harappan Phase, as recent as 2,900 years ago (90). This widespread fluvial redistribution of sediment suggests that reliable monsoon rains were able to sustain per

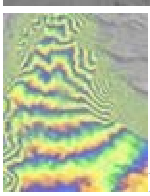
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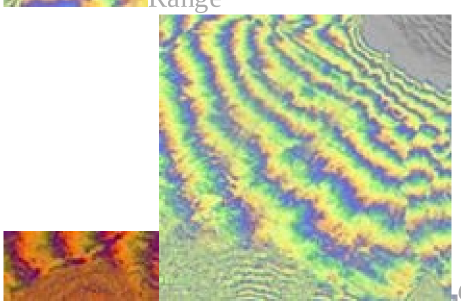
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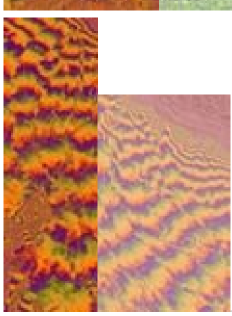
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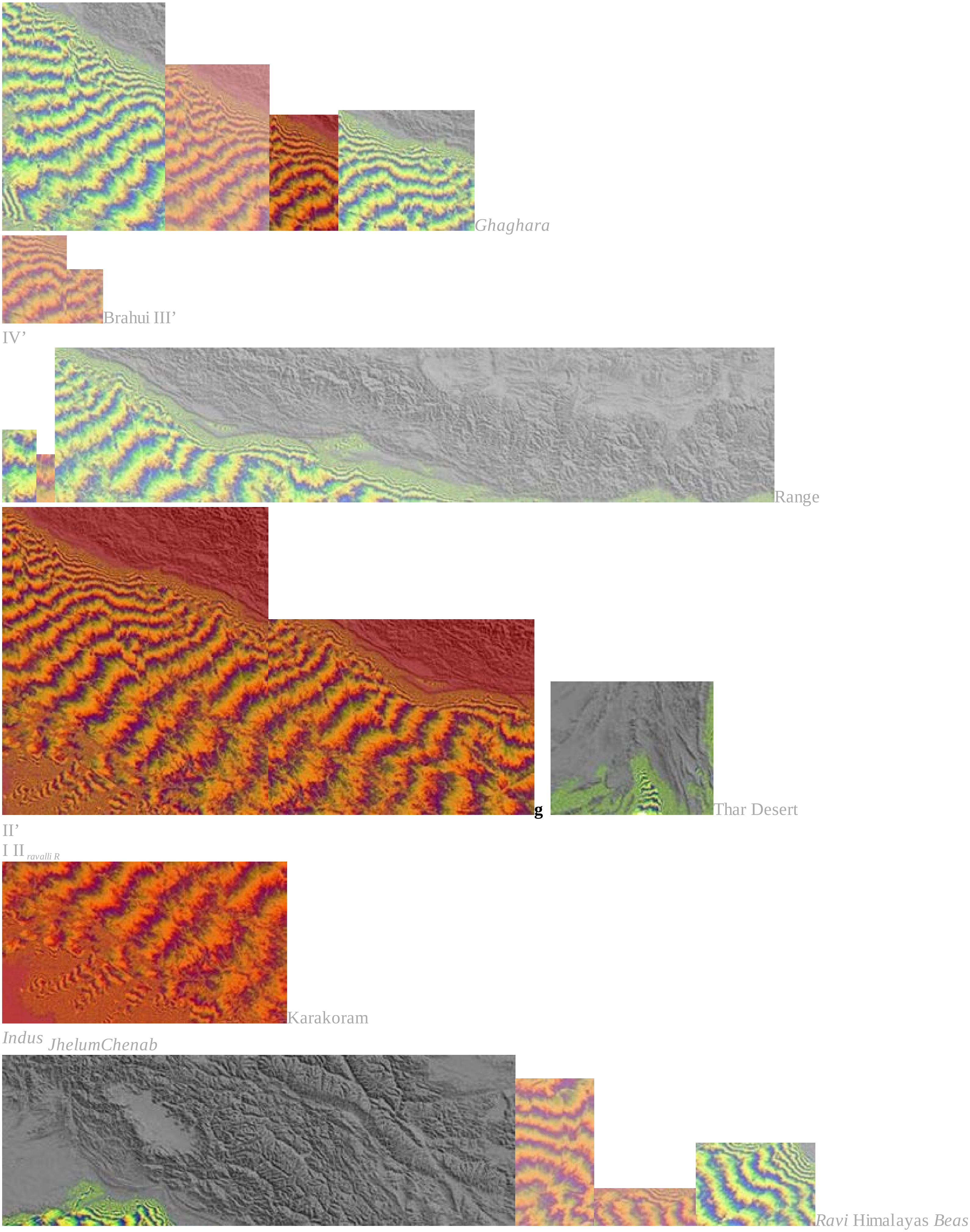
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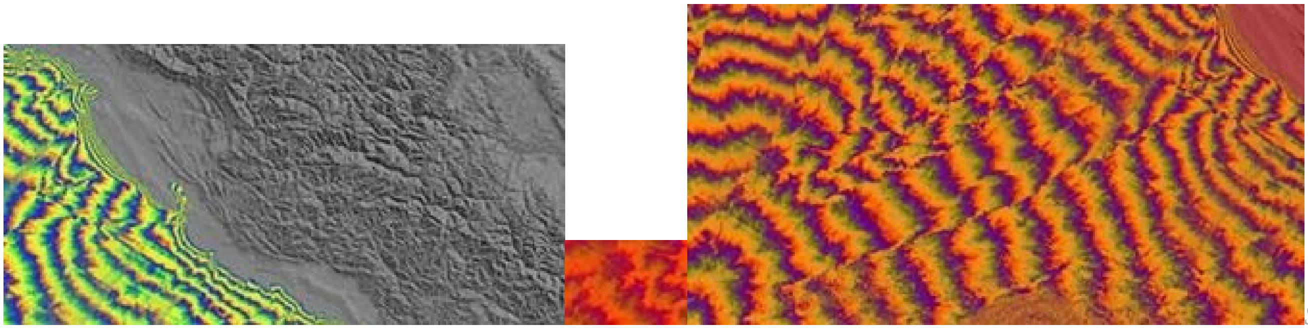
Ganga



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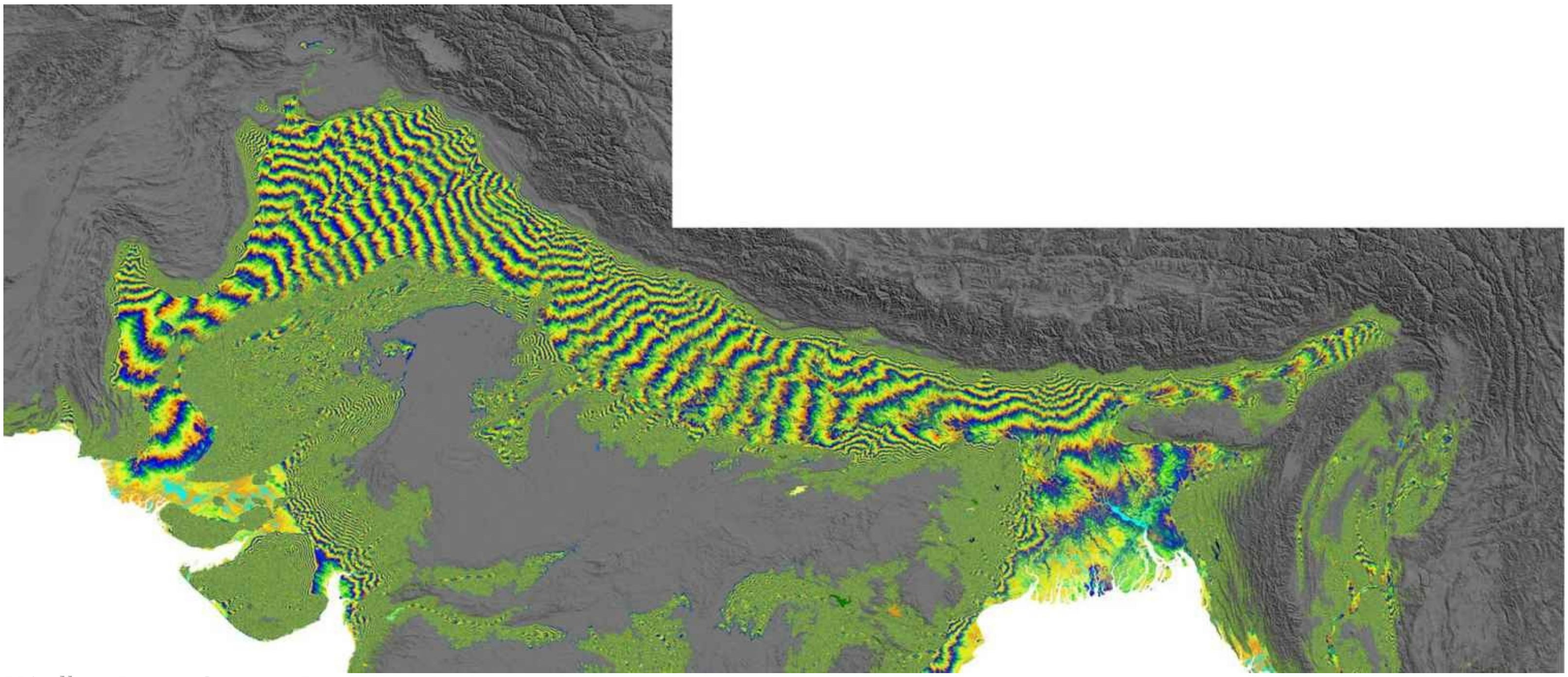


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Yamuna

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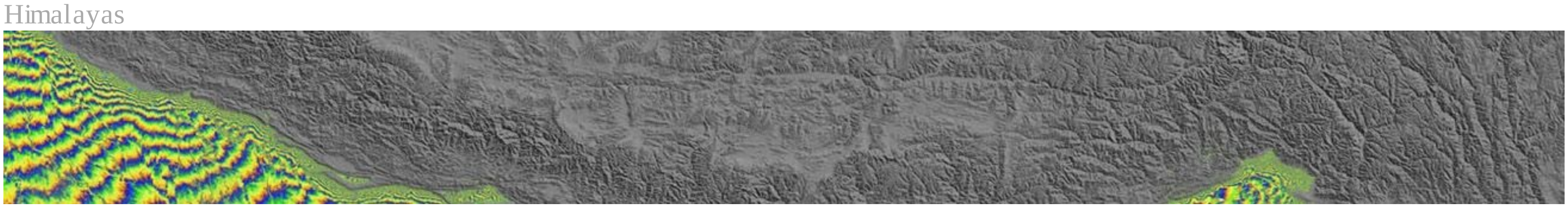
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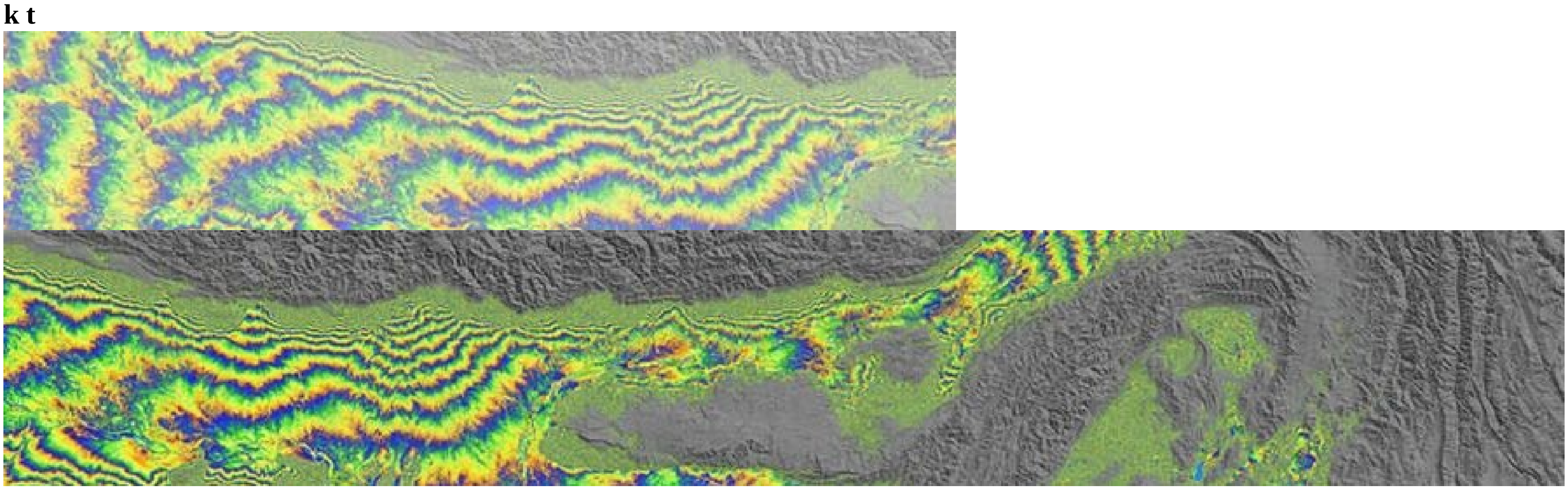
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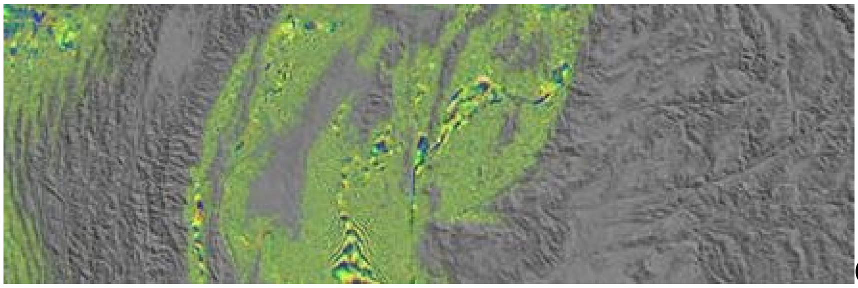
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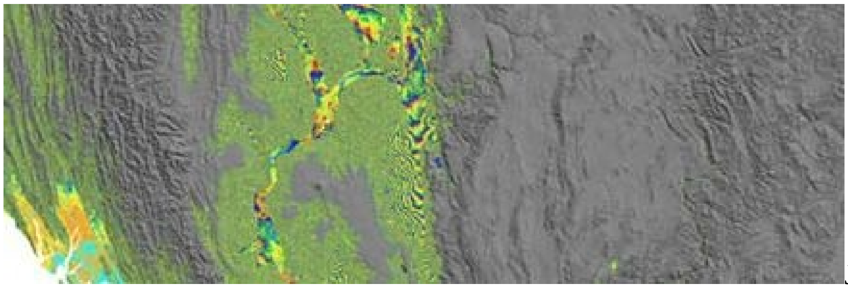
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Large-scale morphology of the Indus and Ganga Plains . Convex downslope, aggradational landscapes have a lighter mask, whereas incisional landscapes have a red mask. (B) Along-channel longitudinal profiles for the Indus and its Punjab tributaries. (C) Hydrographs for the Indus and confluent Punjab tributaries (Panjnad River).

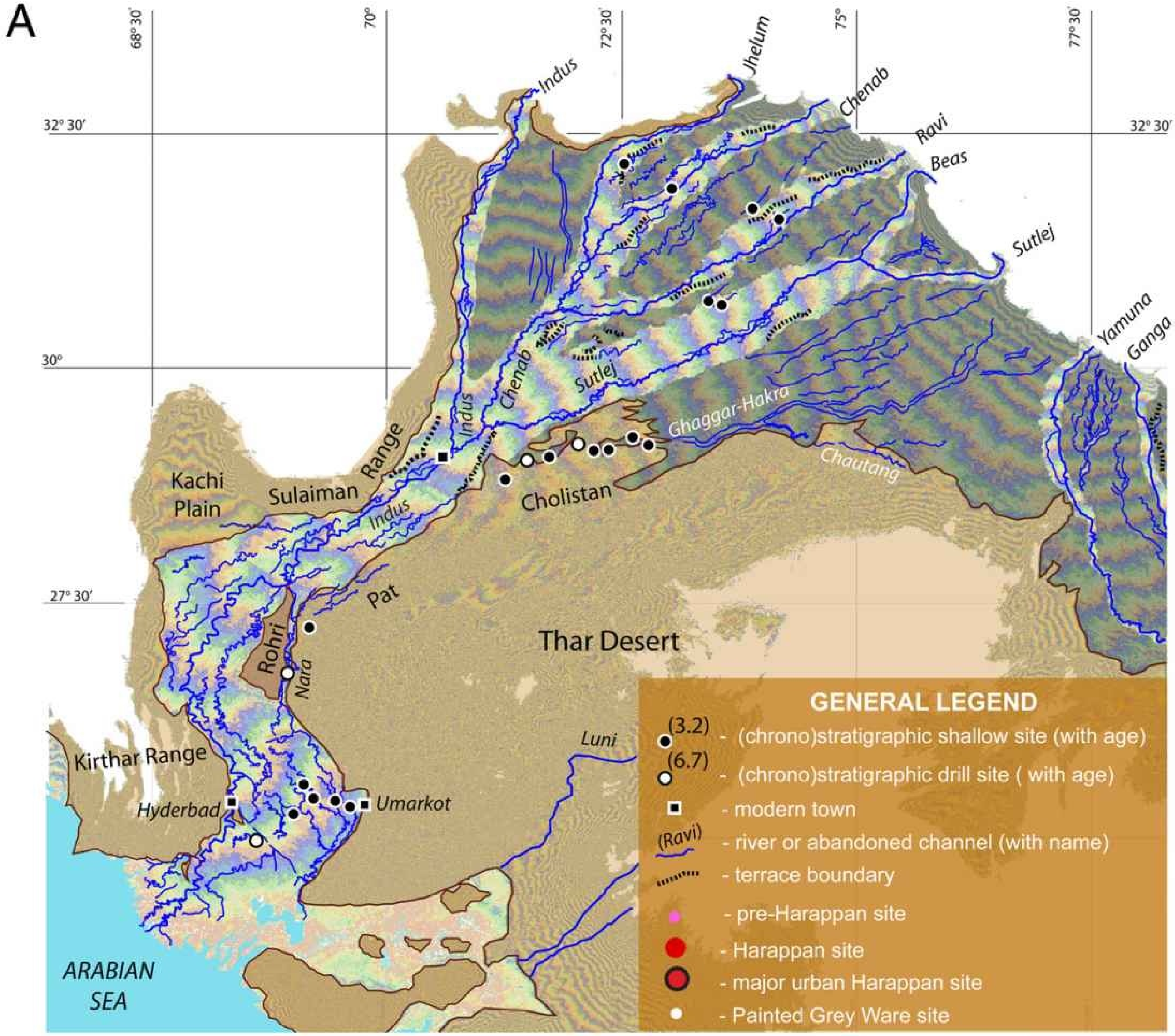
indicate that these fluvial scars were produced a long time before there was a civilization in South Asia - as early as 49,000 years ago. Existing chronologies (84,85) and the age determination by Giosan team on the bank of Sutlej (83) identified deposits of Late Pleistocene age, indicating that the interfluve were formed during the last glacial period, not in the Holocene. Provenance detection (86) suggests that the Yamuna may have contributed sediment to this region during the last glacial period, but switched to the Ganges basin before Harappan times (83). Thus, the Landstat data has nothing to do with the Ghaggar-Hakra River in the Holocene period, the landscape imagery represents a situation way before the emergence of human settlement in the area.

Thus, notwithstanding the numerous speculations advancing the idea that the Ghaggar-Hakra fluvial system was a large glacierfed Himalayan River or Yamuna and Sutlej rivers ennial rivers earlier during the Holocene and explains why Harappan settlements flourished along the entire Ghaggar-Hakra system without access to a glacier-fed river. Similar, strictly monsoonal rivers maintaining a groundwater-fed base flow are now active only on the more humid Ganga basin. Giosan team also document renewed fluvial deposition on the lower Ghaggar-Hakra system approximately 700 years ago, which indicates that seasonal monsoon flows intensified episodically during the late Holocene and may provide an explanation for the high concentration of medieval fortified sites in this region (88).

(4) Based on O^{18} isotopes the researchers reject the oft-quoted dry/wet/dry scenario of Gurdip Singh et al and agree with Enzel et al who suggest that Thar had started to become arid by 4800 BC (81), more than a millennium before the Early Harappan phase (3300–2600 BC) and that the Harappan Civilization arose and fell during a semiarid climatic conditions similar to the present day. There was no particularly wet interval of substantial duration in between. This decline in rainfall contributed to a decrease in massive floodings in the rivers, including the Ghaggar-Hakra River braids, allowing the

Harappan civilization to emerge as the flooding hit just the "right level" for agriculture by inundation.
rains. The Harappan Civilization came to an end. The Ghaggar-Hakra channels also dried up and most of the settlements were abandoned. Thus, the capture of glacial sources, such as Sutlej and Jamuna, had nothing to do with the final end of the 'Sarasvati' in the late Harappan period.

(6) Diminished monsoon rains and less reliable flooding during late Harappan times could



Fluvial and inter-fluvial features of the Indus valley and the Indo-Gangetic Divide *Giosan et. al*

(5) With further decrease in the rainfall, the water flow in the Ghagar-Hakra chennels, which was not that great to start with, decreased, the river channels started to dry up, and whatever water was available, only reached around Fort Abbas where it was soaked up by thirsty desert. However, between 3000-4000 years ago, the aridification went beyond the sustainability of agriculture by inundation, the Indus settlements were abandoned, people started moving eastward where moisture was still available in the form of explain the expansion of settlements near the headwaters of the

Ghaggar-Hakra system, where small-scale floods probably remained more dependable and where rains allowed summercropping on interfluves. Agriculture, land development, and continuous habitation can skew the distribution of archaeological sites, but such biases should be minimal in desert areas like Cholistan. In upper Punjab, Haryana, and Uttar Pradesh, where historical and modern destruction of sites has been intensive, the increase in the number of sites during the late Harappan shows an unambiguous trend. In contrast, in lower Punjab and Sindh, regions of similarly intense history of human activities, the number of sites decreased over the same interval.

The Issue of the Harappan settlement: There are two elements of Harappan settlement in the Ghaggar-Hakra region that are often given weight in proving the superiority of the 'Sarasvati' over Indus. The first is the number game: "there are more Harappan sites on the banks of the 'Sarasvati' than over the entire Indus Valley". The second is the corollary of the first: If there are more "Harappan" sites on the 'Sarasvati', then this should be the birthplace of the Civilization. These are childish arguments, of which Chakrabarti is primarily guilty (91). To begin with, the number game is deliberately skewed: any site where even an Indus sherd was discovered, has been designated a "Harappan" site; we do not know how many of these 'discoveries' are genuinely Harappan. Furthermore, in this game, no distinction is made between the early, mature, late- and post-Harappan. So we do not know the real number. Second, and probably more important, is the size of these 'newly discovered' "Harappan" sites. Most of them are really small, not exceeding half a hectare, even less. Because of this, key sites like Harappa, Mohenjo-daro, Chanhu-daro, Kot Diji, Allahdino, etc. may be equal to hundreds of "Harappan" sites on the Ghaggar. On the basis of the present data, therefore, the Sarasvati sites cannot be considered more important than the Indus sites.

Another claim, sometimes explicit and sometimes implicit, is that the ancient-most remains of human habitation in the area of the Harappan Civilization come from the banks of the 'Sarasvati'. Indeed, they come from the southwestern parts of Bahawalpur. These are older than the Early Harappan remains. On the basis of this evidence they, such as Chakrabarti, claim that this area was the cradle of the Harappan Civilization from where it spread to the West. This is utterly distorted interpretation of archaeological evidence. The remains of the Hakra and Early Harappan phase have been gathered from the southwestern and northeastern parts of Bahawalpur respectively. Hence their influence zones are different. There is no regional overlap between the two. Secondly, only 3 sites have produced remains of the two. This rules out any possibility of appreciable stratigraphical continuity. Thirdly, there is an absence of cultural continuity. Fourthly, the Hakra culture is neither unique nor independent; it bears the influence of the contemporary and even the ancient cultures of Baluchistan and western Sindh; their impact on it is quite obvious.

Some of the places like Kile Ghul Mohammad in the Quetta Valley and Central Baluchistan, Gumla, and Mehrgarh in the Kacchi Valley of east-central Baluchistan are more ancient than these. Here, the cultural sequence is more ancient than in the Hakra. These also present a more systematic and continuous cultural growth. Hence, the process of cultural growth seems to have begun in these very areas rather than in the Bahawalpur zone; and as one moves from the western parts towards Bahawalpur, Rajasthan, Haryana, Punjab and western Uttar Pradesh, the cultural antiquity recedes consistently. Therefore, neither was the Hakra culture the ancient most, nor the Bahawalpur zone the central point for the evolution of the Harappa civilization; nor any of the sites from Bahawalpur and from Indian territory as rich as Mehrgarh in terms of cultural antiquity and systematic cultural growth. Keeping in view all these points, there is no point in renaming the Harappa civilization as the Sara wait civilization.

The Harappan Civilization did not grow up in a vacuum; there is a strong and proven precedent in the form of the Early Harappan cultures, most importantly Kot Diji culture. Ghaggar-Hakra is rich in Kot Diji sites but it is only one of several areas which show the earliest elements of the Harappan culture. Kot Diji (KD) and 72 Kot Diji Phase sites, located in the central Indus Valley region, are far more significant. Several other sites in Sindh also reveal the earliest elements of the Harappan culture, so do a number of sites in Baluchista. Hence the Sarasvati can neither be called a major contributor to the Harappan culture nor equated with the Indus in this respect. However, if in future the Sarasvati sites reveal Harappan cultural contents that surpass those of the well-known Harappan sites outside the Hakra and the Ghaggar zone, the Sarasvati will certainly get far more credit.

J.P. Joshi (79), later to be the DirectorGeneral of the Archaeological Survey, and his two co-authors from their painstaking work on the distribution of the Indus-culture sites concluded that the "Ghaggar was a mightier river than the Indus, with its own network of tributaries" (79). One can immediately reply that if sites of protohistoric cultures on its banks is the best index of its size, then the Kali Nadi in the Doab, rich in Painted Grayware sites, must have been "mightier" than the Ganga, which in the same region has few to show besides Hastinapur. J.P. Joshi and his colleagues attribute the absence of Harappan sites on the Ravi, Beas and Sutlej to "the erratic behavior" of those rivers, by which they must mean not simply the proneness of these rivers to floods (which even small rivers like the Sarsuti would have), but their hugely large volumes of water and areas of floodland. They thus concede in the same breadth, as it were, that the Ghaghar-Hakra had the settlements on its banks, because it was a smaller and tamer stream. Indeed as Rajesh Kochhar pertinently observes: "It is very likely that a *mighty* Ghaggar would have precluded the appearance of chalcolithic settlements on its banks" (19). The possibility cannot, of course, be excluded that remains of large numbers of chalcolithic settlements on the floodplains of the great rivers have simply been washed away, a fate that remains of similar settlements on the Hakra have escaped.

Yash Pal, Misra, and their many campers vigorously attempted to validate the century-old speculation that the Ghaggar-Hakra had indeed been a large river and argued that the paleochannels of the RgVedic Sarasvati coincided with the bed of the present-day Ghaggar-Hakra. They postulated that the Sutlej and the Yamuna were the main tributaries of the Ghaggar and that subsequent tectonic movements might have forced the Sutlej westwards and the Yamuna eastwards, causing the Ghaggar to dry up. The conclusions drawn by these authors were immediately questioned by other researchers, to be discussed below, which categorically proved through field work that the connection of the Ghaggar with the Jamuna and the Sutlej was just a speculation, in contradiction to multitasked scientific data.

However, on closer reading of the papers published by this community of scholars, it seems that there were contradictory claims circulating, not just about the origin of the river, but also its nature. The most exaggerated of these studies painted a picture of the river as dynamic and powerful, similar to that described exuberantly in the RgVeda. Like its mythical incarnation, the geological entity flowed from the Siwalik Hills at the edge of the Himalayas and through the Punjab, Haryana, northern Rajasthan, through the Thar desert into Pakistan, and finally entered the sea at the Rann of Kutch. Some argued that the Ghaggar-Hakra was a perennial river (68); others said that it was fed by the Yamuna (69) and the Sutlej (70); while yet others stated that the river was monsoon-fed (71). Theories about its demise also abound - attributing it to the changing course of the Sutlej and the Yamuna (72), to seismic activity in the region which made it subterranean (73,74), to its disappearance in the Kutch (75). The only consensus seems to have been that the Ghaggar-Hakra had indeed once been a

powerful paleo-hydrological body. Significantly in these studies, no conclusive evidence was presented to pinpoint when the river dried up or, importantly, if the paleo-channel finally drained into the sea or soaked in the Thar desert.

Where was the Vedic Sarasvati after All? Rajesh Kocchar (19) draws our attention to two alternative descriptions of the Sarasota in the Vedic literature. One is that of the RgVeda, the long and mighty, partly mountainous river, receiving a number of tributaries. In addition, there are independent rivers in the region that go to the sea on their own, Sarasvati being one of these sisters. (The number seven may have been used in the sense of an auspicious number rather than in an exact sense.). Kocchar calls it the *Naditami* Sarasvati, after the famous *Naditama* and other similar verses in the RgVeda. The other description is that of the later Vedic and post-Vedic literature: a sickly river, sometimes nourishing the Vedic *rishis* with its drinking water, sometimes disappearing underground, sometimes drying up in the desert near a place called Vinasana. Kocchar calls such descriptions *Vinasana* Sarasvati. The two descriptions are inconsistent with each other and Kocchar proposes that this inconsistency can only be explained if we assume that the description of the *Naditama* Sarasvati applies to one river and the *Vinasana* Sarasvati to another. He argues that the Ghaggar-Hakra, even with the presumed catchment of the Sutlej or Yamuna rivers, can in no way matches the attributes of the RgVedic *naditama* Sarasvati, and that the Ghaggar ‘system’, does not fit the RgVedic description. It was most likely already defunct in the RgVedic times.

We must therefore look west of the Indus to locate the *naditama* Sarasvati. For a clue, we turn to the Avesta. The Avestan *Harahvaiti*, phonetically the same as *Sarasvati*, was known to the Greeks as Etymander and is now called Arghandab. RgVedic Sarasvati, however, is to be equated not with the Arghandab but with the Helmand, of which the Arghandab is the main tributary. It is a 1,300 km long river in Afghanistan. It rises in the recesses of the Koh-e-Baba Range, about 80 km west of Kabul city, and flows in a generally southwesterly direction. (The three major rivers of Afghanistan - Helmand, Kabul and Hari-rud - all get their water supply from the same geographical area, that is, the central Hindu Kush Range.) The Kabul and Helmand start within 50 km of each other. Anyone familiar with the Kabul can be expected to have known the Helmand also. In the mountain area, the Helmand flows in narrow valleys with gorge-like cliffs. About 65 km above Girishk the topography changes. The Helmand enters into a flat country and flows over a gravelly bed. Near the Iranian border, it takes a sharp turn north and empties into an inland lake in the Seistan called Hamun-e Sabari. Several tributaries join the upper Helmand: Kaj-rud, Tirin, Rude Musa, Gala, and others. The only other major river in the system is the 560 km long Arghandab which also rises in the mountains. A low line of hills separates the river from the city of Kandahar. The Arghandab joins the Helmand at Qala Bist, 70 km below Girishk. Two intermittent streams, Kushk-e Nakhud and Garmab, join the Arghandab from the north. The Helmand always has plenty of water. In ancient times when there were no dams, it got flooded in spring when snow melted in the mountains.

According to Kocchar, there is an uncanny similarity between the RgVedic description of Sarasvati and the Avesta description of Helmand. R.v (6.61.8) talks of Sarasvati "whose limitless unbroken flood, swift moving with a rapid rush, comes onward with tempestuous roar", while Yasht (10.67) refers to "the bountiful, glorious Haetumant swelling its white waves rolling down its copious floods". This suggests that the same river is meant in both the cases.

This explanation is quite plausible. First, the Vedic people were at home in southeastern Afghanistan, western Baluchistan, and the present-day Pashtun country of Pakistan. The western tributaries of the

Indus are mentioned as eloquently in the RgVeda as the Punjab rivers. Some of these western rivers can be easily identified. The *nadistuti* hymn (10.75.6) says: "*First with Tristama thou art eager to flow forth with Rasa and Susartu, and with Svetya here. With Kubha; and with these, Sindhu and Mehtanu, thou seekst in thy course Krumu and Gomati*."

Kubha (Kabul) and Krumu (Kurrum) are easily identified, GomatI is the Gomal in Baluchistan, and not the *Gomati* of east Uttar Pradesh. This identification is significant because it illustrates the later reuse of a *RgVedic* name. A small town Matun south of Kurrum reminds one of Mehatnu. Rasa here is obviously a tributary of the Indus, although at places in the RgVeda it denotes a *semi-mythical* river. Its significance lies in the fact that its homonym Ranha (or Ragha) is a semi-mythical river in the Avesta. Elsewhere, there is mention of Suvastu (the Soastos of Arian), the modern Swat, which is a tributary of the Kabul. Since most of the rivers are merely named in the RgVeda and not discussed, the only clues available for their identification are phonetic. The point here is that the home of the Vedic people was not only the Punjab but also, most likely the earlier, the area across the Indus.

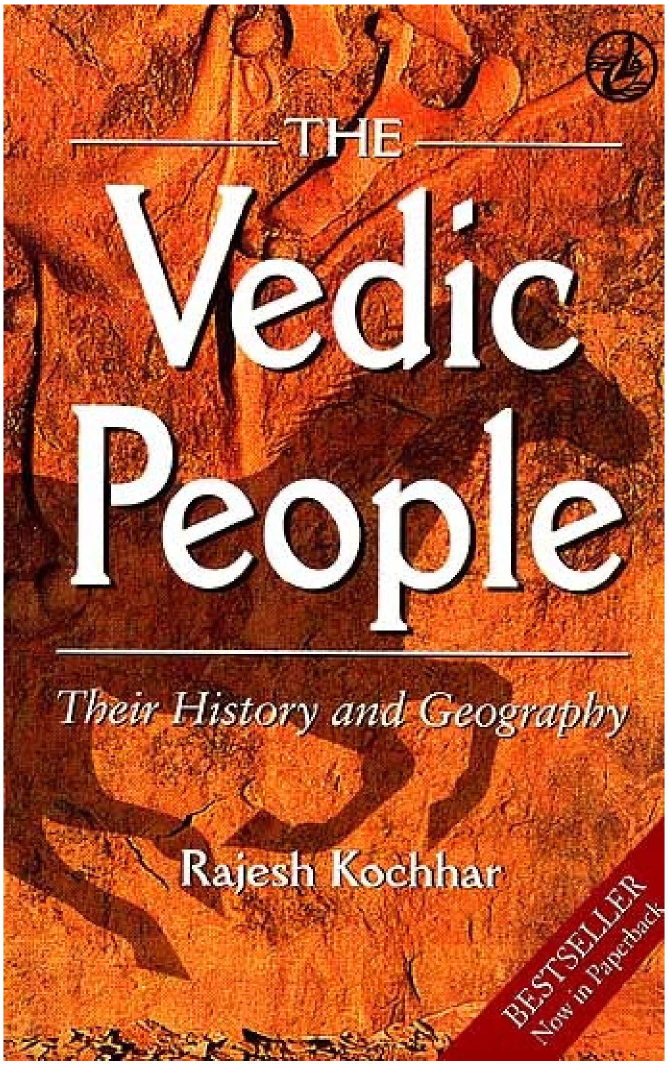
If we identify the *naditama* Sarasvati with the Helmand, we can consistently account for all its attributes. Sarasvati, the mother of its tributaries, would be the sister of other independent rivers in the region like the Farah-rud and Fradathrud. The Arghandab can be equated with Drasadvati of the RgVeda and, say, the Tarnak with Apaya. There have already been suggestions that Arjikiya be identified with the Arghastan. Lakes like Saryanavant and Anyatahplaksa can easily be placed in the hilly areas of Koh-e-Baba from where the Helmand starts. The place name Girishk in the region is probably an old name connected with *Giri*, the mountain. It is now easy to understand the association of Paravatas, the mountain people, with Sarasvati. These Paravatas are probably related to the people called Paroyetai mentioned by Ptolemy and believed to be located near the southern border of Paropamisadae (Kabul).

Moving eastwards from the Helmand region, the RgVedic people would have found the Indus mightier than any river they had seen before. So, they simply named it *Sindhu*, the River. Further east, they would have found the Ghaggar River braids in more or less the same state as it is today. On one of its branches was bestowed the name and the sanctity of the old Sarasvati. In its upper course, this ‘Sarasvati’ is more likely to be the present-day Sarsuti rather than the Ghaggar For one, the name is the same. There are in fact four neighboring Siwalik streams all carrying the name Sarsuti. The local tradition holds the easternmost one, emerging from Adi Badri, to be the most sacred. Secondly, more sites with ancient names are associated with it than any of its neighbors. Examples are Kapalmochan, Thanesar (Thanesvara), and Kurukshetra. Interestingly, no other river of the system carries a RgVedic name. There is a remarkable coincidence whose full significance is not yet clear. Both the Sarasvati of Haryana and the Sarju of eastern Uttar Pradesh are named after RgVedic rivers, and both fall into rivers with similar names, Ghaggar/ Ghoghra (19).

Mahabharata Salyaparvan says that there are seven rivers in the world known as Sarasvati. This geographical absurdity must be considered significant because it points to a realization that the location and characteristics of post-Vedic Sarasvatis were not capable of satisfactorily explaining the various references in the corpus of the sacred literature. Bhagavata Purana (4.19.1) and Vamana Purana Saromahatmya (SM) (21.19) explicitly call the Vinasana Sarasvati, *Praci* (eastern) Sarasvati implying the existence of one in the West. Vamana SM (37.60-61) says that Gomati joins Sarasvati, apparently not aware that in the RgVeda, Gomati is associated with Indus. It would thus appear that since the Vedic people had moved away for good from the regions where these rivers flowed, their

geographical description became creative rather than factual. As the centre of the Aryan activity moved east of the Yamuna, even the Vinasana Sarasvati was forgotten. As a mark of respect to the old Sarasvati, it was made into an invisible river that joined the Ganga and Yamuna. Thus, in its transition from the *naditama* to the *Vinasana* to a mythical river, Sarasota, like Soma, traces the stepwise history of the IndoAryan migration from Afghanistan to the Ganga Plain.

The fact is that there has never been in the popular consciousness that goes into rivername fixing, any connexion between the Haryana 'Sarsuti', on the one hand, and the dry beds of the Chautang, Ghaghar, Hakra and Nara, forming the line of the postulated Desert River, on the other. From the seventeenth-century work *Tarikh-i-Tahiri* it appears that above upper Sind, the dry desert



river was called Hakra, Wahind and Wahan, and below, it was given the name Nar. No name or local tradition has ever connected the Desert dry beds with the Sarasvati.

One cannot but agree with Rajesh Kochhar that to insist on imposing the name "Sarasvati" upon the dry beds of the Desert River "obliterates the vital distinction between hypothesis and fact."(19).

Conclusion: It is around the late 1980s, with the rise of political Hindutva, that historians and archaeologists closely associated with Hindutva ideology initiated the project of the 'Aryanization of the Indus Civilization' (15,41,92). A symposium was organized by the Deen Dayal Research Institute and Voice of India (an active arms of the Sangh Parivar) in New Delhi in 1993 to take the project firmly into the public sphere of the Indian polity. This project argued against the migration of the Aryans from the West and asserted that the Harappans were Vedic Aryans. The hydrological center of

this process of ‘Aryanization’ - the practice of reading Aryan elements in Harappan material culture - was the river Sarasvati which, by this time, as have been shown above, had moved from the mythological to the archaeological realm, its epistemic valence made more powerful by the assertions of postcolonial geological sciences.

In this stage, the Sarasvati was transformed from a boundary object to a visionary object. This occurred through Hindutva’s appropriation of archaeology to push its ideological agenda. Overwhelmed by the seeming hydrological validation of the Sarasvati, as well as the high concentration of Harappan sites in the Ghaggar-Hakra region, archaeologists sympathetic to the Hindutva cause provocatively argued that it was the Sarasvati rather than the Indus that was the centre of the Harappan Civilization (54,61,79, 95-99).

A large archaeological and geological data is now available that completely negates the association of the Vedic Sarasvati with the Ghaggar-Hakra River braids, the latest and probably the most comprehensive one is that of an international research team, headed by Liu Geosan. The data collected by these scientists of various backgrounds and the analyses of early data gathered by other scientists is now sufficient to refute this notion of the Ghaggar-Hakra water stream equating with the Vedic Sarasvati.

Attempts by Sarasvati revivalist groups to use geological data to equate the Ghaggar with the Vedic Sarasvati have been compromised by the application of poor science and sins of exaggeration and omission. The propaganda however continues. A false geological narrative is being constructed and disseminated. Whether the Vedic people were present on the plains of Haryana and Punjab before the Ghaggar dried up and whether they are the same people who built the Harappan Civilisation is not a question that geology can answer. That battle is for archaeologists and linguists. One hopes it is settled by good science and not dogma.

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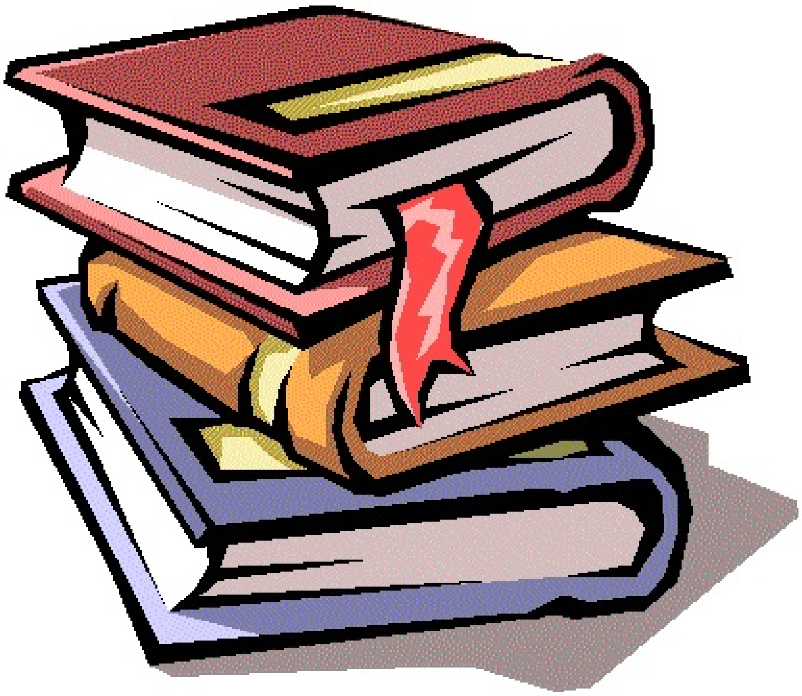
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SECTION VI

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VI.1. Bibliography VI.2. Glossary Chapter VI. 1

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Chapter VI.2

Glossary

Arid : Dry.
Ajivikas: An ancient religious sect, associated with Makkhali Gossamer
Aranyakas: literally 'forest books'; part of the Vedic corpus
Archaeological sources: all tangible, material remains
Aryans: A group of people who spoke the IndoEuropean languages like Sanskrit, Latin, Greek etc
Aggradation: The 'building up' of the land surface (in Holocene times especially the lower reaches of river channels) by the *depositional* action of rivers, winds or seas *(see* alluvium, anastomosing and loess). Its oppos- ite is *denudation.*
Assemblage: in archaeology, refers collectively to all the industries found at a site
Alluvium: Sedimentary deposits of eroded rock fragments laid by the action of rivers. Larger particles, notably gravels, are deposited upstream, while finer materials (usually called *silts)* are deposited downstream, sometimes right into waterbodies, where *alluvial fans* are formed. If offshore conditions are right, *deltas* are formed. As unconsolidated (though usually deep and mineral-rich) material, *alluvisols* are a type of *immature, skeletal* or *azonal* soil, manifesting poorly developed *horizons,* which are levels of different sttucture and organic activity.
Dendritic: Tree-like branching.
Dendrochronology: Tree-ring dating.
Distal: Situated farthest *away from* the point of attachment or connection, the converse of *proximal*, nearest.
Dasa,Dasyu: Peoples mentioned in the Rig Veda. The Aryans were in conflict with their chiefs.
Dravidian: a family of languages, including Tamil, Telugu, Malay- alam, and Kannada

Ecology : Study of plants or animals or peoples and institutions in relationship to the environment.
Ecotone: The transitional zone between two biomes.
Exogenous: Coming from without. Thus, the Nile in Egypt is fed from drainage basins that lie ourside Egypt in areas of adequate rainfall. A substantially positive water balance is required for rivers to originate, otherwise only wadis form (q.v.).
Epigraphy: the study of inscriptions

factory site: a place where tools were made **faunal analysis**: the analysis of animal bones
jati: a word with several meanings including caste, birth, and type

Black and Red Ware (BRW): Pottery whose surface is partly black and partly red, found in various different chronological and cultural contexts **Brahmanas:** Members of the premier *varna* in the Brahmanical *varna* order; prose explanations of the Vedic Samhitas
Brahmi: an ancient Indian script.

Carbon-14 (C-14): /radiocarbon dating: a scientific dating method used in archaeology, based on the principle of radioactive decay; used to daeteorganic material.
Chalcolithic: a culture marked by the use of copper/bronze and stone.
Catastrophic : Disastrous
copper hoards: certain specific types of copper objects found in pro- tohistoric contexts in the doab as well as in some other parts of the subcontinent
Kharoshthi: an ancient script prevalent in ancient Pakistan and Afganidstan

Kshatriya: the *varna* associated with warfare and rulership

Late Levels : An excavated archaeological site is divided into layers or settlement levels according to their ages. Accordingly the late or the youngest settlement level will be somewhere near the top of the site and the oldest will be at the bottom most. **Late Harappan**: the post-urban phase of the Harappan culture

Linga: a phallic emblem of the god Shiva

Literary sources: texts, written or oral

Logo-syllabic script: a script in which each symbol stands for a word or syllable

Nucleation: A settlement type that has its buildings clustered tightly together, leaving little space in between (only squares, greens or plazas, not fields and farms.

Neolithic: food-producing stone age cultures,

marked by ground and polished stone tools **Vedas**: four ancient Sanskrit texts, namely the Rig

Veda, Yajur Veda, Sama Veda, and *Atharva Veda* **Occupation deposits**: At each level of the excavated site there will be evidence in form of pottery etc. to show that the site was occupied. These deposits are called occupational deposits. **Ochre Colored Pottery**: **A** pottery found in the upper Gangetic plains. It has been found at the levels that underlie early Indian historical pottery.

Palynology: Pollen analysis. Since many pollens were originally airborne and all are different, identification and counting of different types in sedimentary and peaty deposits can reveal changing vegetation types over time, e.g. from woodlands to grasslands where man has cleared for farming and grazing.

Phytoliths: Silica deposits in soil from plant cells, notably grasses. The morphology of the deposits is related to transpiration and so can indic- ate water availability.

Painted Grey Ware (PGW): a distinctive type of fine, grey pottery with designs painted on in black, made and used in pans of north India between c. 1000 and 500 BC

Palaeo-channel: an old course of a river **Pali:** an ancient language belonging to the IndoEuropean family of languages; the language of the canon of the Theravada school

Pleistocene: the sixth epoch of the Cenozoic age; began about 1.6 may

Polytheism: a belief in many gods

Prehistory: the past before the advent of writing **Porto-history**: a segment of the past that is transitional between history and prehistory

Silt : Material deposit from a flowing river on the banks.

Savanna: Low-latitude grassland, often containing trees such as baobab *(Adansonia digitata)*, acacia and euphorbia. The llanos and campos of South America are s
avannas, and it covers much of Australia.
However, the regime is often referred to as 'Sudan-type', as it extends right across sub-Saharan Africa from the White Nile to the Atlantic..

Steppe: Short grassland, most extensive in midlatitudes. A belt extends all the way from the Ukraine to northern China.

Samhita: a collection of hymns, associated with the Vedas

Sanskritization: an idea developed by the SOCiologistM. N. Srinivas, referring to a tendency of lower castes to imitate and adopt norms and practices of the upper castes in order to improve their

ranking in the caste hierarchy

Tectonic Uplift : Relating to the process which elevate large areas of earth's surface.